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1984-85

# Brandeis University Bulletin

Graduate  
School of Arts  
and Sciences



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It is the policy of Brandeis University not to discriminate against any applicant on the basis of race, color, religion, sex, sexual or affectional preference, age, national origin, veteran or disability status. The University operates under an affirmative action plan and encourages minorities and women to apply, both in terms of employment and to all the rights, privileges, programs, and activities generally accorded or made available to its students. Inquiries concerning discrimination may be referred to the Assistant to the President for Affirmative Action, Grymnish Building, Brandeis University and/or to the Director, Office for Civil Rights, U.S. Department of Education, Washington, D.C.

Programs, requirements, fees and other information are set forth herein as they exist at the date of this publication. Brandeis University reserves the right to make changes without notice.

## Brandeis University

Founded in 1948, Brandeis University is recognized as one of the finest private liberal arts universities in the United States. It received accreditation within five years, the shortest possible time, and was awarded recognition by Phi Beta Kappa in 1961, only 13 years after founding — the youngest institution so honored in over 100 years. It is the only Jewish-sponsored, nonsectarian institution of higher learning in America and was named for United States Supreme Court Justice Louis Dembitz Brandeis (1856-1941).

Of the approximately 2,000 accredited colleges and universities in the nation, Brandeis is one of only 100 recognized as research universities. As such, Brandeis combines the breadth and range of academic programs usually found at much larger universities with the intimate educational atmosphere of an undergraduate college.

Brandeis University is accredited by the New England Association of Schools and Colleges, Inc. Originally accredited in 1953, Brandeis was approved in 1977 for continuing membership in the Association for ten years, the maximum period permissible.

A Brandeis education encourages personal fulfillment, but only within the framework of social responsibility. Equipped by a liberal arts education, the individual sees reality as a whole with many intricately connected parts. That individual rejects the idea that there is only one truth, one perspective, one redeeming set of values. Study of the liberal arts is a time of inquiry, honest skepticism, and evolution of the intellect. Paradoxically, a liberal arts education — despite its lack of specialization — becomes sound preparation for a world that constantly makes old learning obsolete.

Brandeis, therefore, attaches prime importance to the liberal arts curriculum. It is designed to offer full academic opportunities for those students planning to pursue graduate or professional studies, as well as those whose educational objective is the baccalaureate degree.

For full information on the undergraduate curriculum, see the Bulletin of the College of Arts and Sciences.

"It must always be rich in goals and ideals, seemingly attainable but beyond immediate reach . . .

"It must become truly a seat of learning where research is pursued, books written, and the creative instinct is aroused, encouraged, and developed in its faculty and students.

"It must ever be mindful that education is a precious treasure transmitted — a sacred trust to be held, used, and enjoyed, and if possible strengthened, then passed on to others upon the same trust."

— from the writings of  
Louis Dembitz Brandeis (1856-1941)  
on the goals of a university.

# The Graduate School of Arts and Sciences

## History and Organization

The Graduate School of Arts and Sciences was formally established in 1953 when the university's Board of Trustees authorized graduate study in the departments of Chemistry, Music, Psychology, and Near Eastern and Judaic Studies. The general direction of the Graduate School is vested in a Graduate Council of the Faculty composed of the president and the dean of the faculty, ex-officio; the dean of the Graduate School; and one representative, usually the chair, of each of the several university departments and committees offering graduate instruction. The members of the Graduate Council are appointed by the president on the recommendations of the dean of the Graduate School. The functions of the Graduate Council, exercised in consonance with university policy, are to determine requirements for admission; to provide programs of study and examination; to establish and maintain requirements for graduate degrees; to approve candidacy for degrees; to make recommendations for degrees; to make recommendations for new areas of graduate study; to lay down such regulations as may be considered necessary or expedient for governing the Graduate School; and to exercise a general supervision over its affairs. The dean of the Graduate School is the chair of the Graduate Council and the chief executive officer of the Graduate School.

## Objectives

The underlying ideal of the Graduate School is to assemble a community of scholars, scientists, and artists, in whose company the student-scholar can pursue study and research as an apprentice. This objective is to be attained by individualizing programs of study, restricting the number of students accepted, maintaining continual contact between students and faculty, and fostering the intellectual potential of each student.

Degrees will be granted on the evidence of intellectual growth and development, rather than solely on the basis of formal course credits. Fulfillment of the minimum requirements cannot, therefore, be regarded as the sole requisite for degrees.

The Graduate School of Arts and Sciences is designed to educate broadly as it trains professionally. It offers courses of study leading to the master's and doctoral degrees.

## Areas of Graduate Study

During the academic year 1984-1985, graduate programs will be offered in the following areas:

1. Anthropology
2. Biochemistry
3. Biology
4. Photobiology
5. Biophysics
6. Chemistry
7. Classical and Oriental Studies
8. Comparative History
9. English and American Literature
10. History of American Civilization
11. Jewish Communal Service
12. Joint Program of Literary Studies
13. Mathematics
14. Music
15. Near Eastern and Judaic Studies
16. Physics
17. Politics
18. Psychology and Cognitive Science
19. Sociology
20. Theater Arts

## Graduate School

The Graduate School office is located in the Rabb Graduate Center. The office is open Monday through Friday from 9 A.M. to 5 P.M. All requests for information, catalogs and application forms should be addressed to the Dean of the Graduate School of Arts and Sciences, Brandeis University, Waltham, Massachusetts 02254.

## University Library

The new Leonard L. Farber Library serves as the visual and academic focal point of the Brandeis University Libraries. Farber, along with the Jacob and Bertha Goldfarb Library and the Rapaport Treasure Hall comprise the main library which houses the collections supporting humanities, fine arts and social sciences. Gerstenzang Science Library, located within the science complex to allow convenient access by its users, contains the collections supporting the physical and natural sciences and mathematics.

The main library includes 850,000 books, 600,000 microtexts, 2,500 periodicals and 55 newspapers. Gerstenzang contains more than 100,000 volumes and subscribes to over 900 periodical titles.

The main library lists over 150,000 documents emphasizing labor, health, politics and statistics, including many census bureau publications, as well as the major collections

supporting humanities, fine arts and social sciences. In addition, a legal reference collection, encompassing *Corpus Juris Secundum*, U.S. laws, federal court decisions (Supreme, circuit and district), the *Federal Register*, the *Code of Federal Regulations*, *Massachusetts General Laws Annotated* and *Massachusetts Supreme and Appellate court decisions* enables users to conduct legal research on both state and federal levels.

Both libraries provide computer literature searching. The BRS (Bibliographic Retrieval Systems) and Lockheed's Dialog access over 175 different data bases.

The special collections section of the library, located in the Rapaport Treasure Hall, houses the rare books collection, the manuscript collections and a portion of the University Archives. Among the research collections are the Spanish Civil War collection; the Leonardo Da Vinci collection; the McKew-Par collection on Magellan and the Age of Discovery; and the Juster Brandeis collection.

The Judaica Department's reading room contains a collection of reference materials and basic texts in major areas of Judaic studies, the ancient Near East, and the modern Middle East.

The Creative Arts Center houses the collections and facilities in music and the fine arts. The Music and Fine Arts reference collections number more than 1,500 volumes and include all major indexes, abstracts, encyclopedias, dictionaries, and bibliographies. The musical score collection of over 12,000 volumes emphasizes scholarly editions in medieval, Renaissance, and baroque music, as well as an increasing collection of performance music of the twentieth century. The sound recording collection contains 13,000 discs, tapes and cassettes with facilities to accommodate 72 listeners.

The Gerstenzang Science Library is a reference and research facility for the university's science complex, providing materials for advanced independent work as well as supporting instructional programs.

Brandeis belongs to two library networks which provide users with materials the library does not own. The OCLC is a national network of more than 3,400 libraries with an on-line bibliographic data base of over 8,000,000 titles.

The Boston Library Consortium, of which Brandeis is a member, provides free interlibrary loans, a union list of serials, cooperative purchasing and borrowing privileges for graduate students and faculty. These services are available to all members of the Brandeis community. Books, journal articles, and other research materials not available in the library may be obtained through interlibrary loan or the consortium.

# Admissions

As a rule, only well-qualified men and women who have completed the normal four-year program leading to the bachelor's degree will be considered for admission to the Graduate School. Graduates of foreign schools and others who have completed the equivalent of a bachelor's degree program may apply, describing the educational program they have completed.

## Testing

Applicants for admission to the graduate programs in biochemistry, biophysics, politics, and psychology are required to take the Graduate Record Examination, including the aptitude test portion and preferably one advanced test in a field related to the proposed area of graduate study. Applicants for admission to the graduate program in psychology must also take the Miller Analogies Test. Applicants to the Jewish Communal Service program must submit the results of either the Graduate Record Examination or the Miller Analogies Test. All other applicants are urged to take the Graduate Record Examination. In order for the results of the Graduate Record Examination to be considered, the applicant should take the examination no later than January preceding the academic year for which application is made. Information concerning the Graduate Record Examination is available from the Educational Testing Service, Princeton, N.J. 08541, or Box 1025, Berkeley, Calif. 94704.

Foreign students, regardless of field of graduate study, are required to take the Test of English as a Foreign Language (TOEFL) unless English is their first language. Applications for admission to the test should be made to TOEFL, Educational Testing Service, Princeton, N.J. 08541, U.S.A. The test is administered at various established centers abroad.

## Application

Specific requirements for each graduate program are to be found under the appropriate headings in this catalog. Each applicant should consult these requirements before filing an application. A student may apply to only one graduate department or program. Applicants to the Graduate School should write to the Dean of the Graduate School of Arts and Sciences, stating which program of study he or she wishes to enter. A catalog and appropriate forms will be forwarded to the applicant. The "Application for Admission" should be completed and returned in duplicate as soon as possible. Applicants requesting financial aid must file a GAPSFA form. Closing dates for receipt of applications by the several graduate departments are included with the application materials.

Applications for admission for the Spring Term must be filed by December 1. Students are not usually admitted at midyear, and those who do gain admission are not normally eligible for financial aid.

All applicants must arrange to forward, in duplicate, official transcripts of all undergraduate and graduate work. In addition, they must have forwarded, on forms provided by the Graduate School, two letters of recommendation, preferably from professors with whom they have studied in their proposed area of study. Applicants who have engaged in graduate study elsewhere should request at least one of the recommendations from a professor with whom they have done graduate work.

Many departments also require the submission of samples of work as well as the materials described above. Applicants should consult departmental requirements in a later section of this catalog for enumeration of additional materials to be submitted.

All applications must be accompanied by an application fee of \$25, payable by check or money order to Brandeis University. No application will be processed until this fee is paid.

## Admission Procedure

All applicants are considered on a competitive basis. The number of students admitted each year in each department is limited so that the Graduate School may operate effectively under its distinctive principles of individualized study and apprenticeship. Consequently, admission may sometimes be denied to qualified persons. Meeting the minimum standards of admission merely qualifies the applicant for a place in the group from which final selections will be made. Selections are based on the applicant's ability to do graduate work of high quality, as shown by the distinction of his or her previous record, particularly in the proposed area of study; the letters of recommendation submitted in support of the application; and his or her presumed adaptability to the particular graduate programs offered by Brandeis University. In addition, knowledge of foreign languages, relevant practical experience in the field, samples of practical work, the results of the Graduate Record Examination, and indications of character are considered.

Each application for admission with all supporting records is first examined by the appropriate department or committee. The department or committee recommends to the Dean of the Graduate School which applicants should be selected for admission and for financial aid. The Dean reviews all applications in the light of departmental recommendations, and informs each applicant of the results in April.

## Acceptance

A student who has been accepted for admission to the Graduate School will be notified by a letter specifying the date by which he or she must accept the offer of admission and awards, if any. If a student selected for admission indicates that he or she does not intend to accept the offer or fails to reply by the date specified, the admissions offer becomes void and another applicant may be accepted.

Brandeis University subscribes to the "Resolution Regarding Scholars, Fellows, Trainees and Graduate Assistants" of the Council of Graduate Schools in the United States. The resolution states:

"Acceptance of an offer of financial aid (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by an actual or prospective graduate student completes an agreement which both student and graduate school expect to honor. In those instances in which the student accepts the offer before April 15 and subsequently desires to withdraw, the student may submit in writing a resignation of the appointment anytime through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer."

Students who are accepted must provide the Graduate School Office with an official final transcript of their undergraduate record and of any graduate work in process at the time of acceptance. In addition, students who are accepted are required to complete and return a medical questionnaire and a health insurance form, which will be sent with notification of acceptance. All acceptances are conditioned on subsequent approval by the University Health Office. All persons admitted to the Graduate School must give evidence of their physical and psychological capacity to carry on their studies.

If, after having been admitted, a student cannot attend, he or she should notify the Dean of the Graduate School as soon as possible. If such students are to be admitted for a subsequent academic year, they must request reactivation of their applications at the appropriate time, and bring them up to date.

## Foreign Students

Applicants who have been denied admission may reapply in a later year, particularly if they have had further training which would strengthen their applications or if they can submit additional letters of recommendation.

Admission to the Graduate School does not imply that the successful applicant has been accepted as a candidate for a graduate degree. Superior performance at Brandeis University is essential. Admission to candidacy for the M.A. or M.F.A. is granted by the graduate department or committee administering the program of study. Admission to candidacy for the Ph.D. is granted by the Graduate Council on the recommendation of the department or committee administering the program of study.

### Readmission

Admission is valid only for one academic year. A student's record is reviewed annually, and he or she may be denied readmission. Students completing the requirements for the M.A. or M.F.A., and students who already hold a master's degree but who have not yet been admitted to candidacy for the doctorate, must make formal application for readmission by the first business day in March. The readmission application must be filed with the Graduate School Office.

Graduates of foreign colleges and universities who have the equivalent of an American bachelor's degree, and foreign students who have been graduated from American universities may compete for admission and financial assistance at Brandeis, which is authorized under Federal law to enroll nonimmigrant alien students.

In order to ascertain the eligibility of the candidate, Brandeis University requires that each applicant file a **Preliminary Request for Application** form obtained by writing to either the Graduate School of Arts and Sciences or the Office of International Programs any time before September 1 of the year preceding the anticipated admission date. This information will be evaluated and the application form itself will be sent to those who qualify.

Final applications must be completed and returned by February of the year in which the student seeks fall admission. Successful applicants will be notified as soon as possible.

**Entrance Examinations.** All applicants whose major language is not English must take the Test of English as a Foreign Language (TOEFL); thorough competence in English is required for study at Brandeis. All applicants are urged to take the Graduate Record Examination (GRE). They should consult this catalog for the departments which may require this examination. For information concerning the administration of both these examinations, applicants should write to the Educational Testing Service, Princeton, N.J. 08541.

**Financial Aid.** Financial aid in the form of scholarships, fellowships, teaching assistantships and research assistantships is available to only a few of the most outstanding students. In any case, the total assistance offered usually covers only a small proportion of the student's total annual expenses. Hence the students, when applying for admission, should indicate a means of financial support. At least \$4,000 in United States currency is necessary to cover living costs for the nine-month academic year, exclusive of expenses for tuition, travel and summer or vacation periods.

**Employment.** The regulations of the United States Immigration and Naturalization Service limit strictly the amount of paid work that a student from abroad may do. During the summer vacation, the Immigration Service may permit the student to obtain off-campus employment. Such permission cannot be guaranteed, however. Students must petition on special United States government forms, through the Office of International Programs, for permission to accept such employment.

## Requirements for the Degree

The following general requirements apply to the awarding of graduate degrees in all areas of study. For specific program requirements students should consult the appropriate section of this catalog.

### Master of Arts

In order to qualify for a master's degree, the student must complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight half-courses of approved study. Departments may, at their option, require more than eight half-courses of graduate study. Departments offering master's programs may require that the candidate demonstrate a reading knowledge of at least one foreign language and pass satisfactorily a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral, or both. Where a thesis is required for the master's degree, two copies must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

The master's degree must be earned within four years from the inception of graduate study at Brandeis University.

### Master of Fine Arts

In order to qualify for the degree of Master of Fine Arts in Music, the candidate must complete with distinction twelve half-courses at the graduate level, and must meet the specific requirements for the degree as set forth under the Music Department, **Requirements for the M.F.A. Degree**, in a later section of this catalog. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

In order to qualify for the degree of Master of Fine Arts in Theater Arts, the candidate must complete the equivalent of sixteen half-courses at the graduate level and must meet the specific requirements for the degree outlined under Theater Arts, **Requirements for the M.F.A. Degree**, in a later section of this catalog. Students enrolled for specialization in dramatic writing must submit two copies of a play in final form in lieu of a thesis.

The Master of Fine Arts degree must be earned within five years from the inception of graduate study at Brandeis University.

## Doctor of Philosophy

In order to qualify for the degree of Doctor of Philosophy, a student must ordinarily complete a minimum of three years of graduate study, including two full years of residence and a third year devoted to the preparation of a doctoral dissertation. Under certain conditions, credit for advanced standing will be granted for work taken in residence in graduate schools of other universities. Each department or committee reserves the right to require prospective candidates for the degree to perform work in excess of its minimum standards to assure thorough mastery of the area.

Prospective candidates must demonstrate proficiency in at least one foreign language. In all areas of study the student must satisfactorily pass a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral, or both. In addition, all prospective candidates must write a doctoral dissertation and defend it in a final oral examination.

To be eligible for the Ph.D. degree in any given year, the student must have (1) been admitted to candidacy for the doctorate, (2) completed all residence requirements, and (3) passed all language and qualifying examinations, by the close of the semester preceding the semester in which the degree will be conferred.

Students entering Brandeis University with no previous graduate work must earn the doctorate within eight years from the inception of study. Students who are granted credit for a year of graduate work completed elsewhere must earn the degree within seven years from the inception of their study at Brandeis.

## Language Requirements

There is no University requirement for foreign language competency at either the master's or doctoral level.

Each department or program determines which languages are acceptable as satisfying its foreign language requirement. Some departments may not require foreign language competency, while others may set requirements which will vary within the sub-fields offered by those departments.

In departments where languages are required, students are expected to satisfy the requirement as soon as possible. Completion of this requirement at another university does not satisfy the Brandeis requirement.

For specific requirements of each department or program, consult the departmental listing in the following section of this catalog.

## Admission to Candidacy

A student who (a) has demonstrated a knowledge and mastery of the subject matter of the field at a level satisfactory to the department or committee; (b) has passed all departmental qualifying examinations; (c) has indicated a capacity for independent research of high quality; and (d) has satisfactorily completed all specific department or committee requirements for admission to candidacy may, at the recommendation of the department or committee, be admitted under the rules of the Graduate Council to candidacy for the degree of Doctor of Philosophy. In order to be eligible for the degree, the student must be admitted to candidacy at least one semester before it is awarded.

## Application for Graduate Degrees

Candidates for the M.A., M.F.A., and Ph.D. degrees must file with the Graduate School Office an application for the degree no later than December 1 for a February degree and no later than March 1 for a May degree of the academic year in which the degree is to be conferred. Upon the written recommendation by a candidate's department or committee that the application be approved, the record will be reviewed by the Graduate Council which recommends the student to the University's Board of Trustees for the degree. In case of failure or withdrawal from candidacy in any year, the student must reapply by filing a new application in a later year.

## Dissertation and Final Oral Examination

When a student is ready to embark upon the preparation of a doctoral dissertation, a Dissertation Reading Committee of no less than three faculty members, at least one of whom is a tenured member of the faculty, will be appointed by the chairman of the student's department. The student's principal adviser will serve as the chairman of this committee. The Dissertation Reading Committee will guide the research for and preparation of the dissertation. When this committee certifies its approval of the dissertation to both the Dean of the Graduate School and the chairman of the student's department, the latter, with the approval of the Dean of the Graduate School, will appoint a Dissertation Examining Committee to preside over the student's Final Oral Examination and will notify the candidate of the time and place of the Final Oral Examination at least three weeks prior to the scheduled date of the examination. Two copies of the dissertation, as well as an abstract of no more than 350 words, should be submitted to the Dissertation Reading Committee for approval. Style and format of dissertations are determined by the respective departments.

The dissertation, when approved by the readers, must then be deposited in the department office where it will be available for inspection by all interested members of the faculty for at least two weeks prior to the Final Oral Examination.

The department will publish in *The Brandeis Reporter* the time and place of a candidate's Final Oral Examination and the title of the doctoral dissertation. The Final Oral Examination will be open to any member of the faculty engaged in graduate instruction and to invited faculty members from other institutions.

The Dissertation Examining Committee, recommended by the department chairman and approved by the Dean of the Graduate School, must be composed of a minimum of three faculty examiners, at least one of whom shall be a tenured member of the faculty and one of whom shall be from a graduate department outside the student's own, though preferably from a related area.

The examination may be restricted to a defense of the dissertation, or may cover the whole field of the dissertation. The candidate will be notified by his or her department or committee of responsibility for coverage prior to the examination.

A report, signed by the Dissertation Examining Committee, certifying the candidate's successful performance on the Final Oral Examination, will be submitted to the Dean of the Graduate School.

## Deposit and Publication of Dissertation

No later than the dates specified in the current Academic Calendar for February and May degrees, the candidate must deposit two copies of the finished dissertation, including the original typescript, in a state suitable for microfilm and Xerox publication. Both copies of the dissertation must have the signed approval of the dissertation supervisor and readers. One copy will be retained by the library, the other will be returned to the student, both bound. The candidate must also submit two copies of an abstract of the dissertation, not exceeding 350 words, which has been approved by the dissertation supervisor.

A detailed statement of the Graduate School publication regulations is available from the Graduate School Office. See also the statement in this catalog, under **Fees**, on the Final Doctoral Fee.

# Academic Regulations

## Registration

Every resident student must register in person at the beginning of each semester, whether attending regular courses of study, carrying on research or independent reading, writing a thesis or dissertation, or utilizing any academic service or facility of the University. Students who have completed their residence requirements and who wish to utilize any academic service or facility of the University must also register.

There is a charge of \$10 if registration is not completed at the time specified in the Academic Calendar.

Registration consists of payment of all fees for the semester and filing a Registration Card and other duly completed required forms. Program Cards are filed at a later date.

## Program of Study

Before filing a Program Card, the student should plan a program of study in consultation with the chairman of the department. All courses for which the student registers for credit must be listed on the Program Card.

Audited courses must also be listed, noted as "audit," and the Program Card must be signed by instructors of such courses.

Graduate students may not normally register for an undergraduate course (numbered below 100) for degree or residence credit unless they secure the signed approval of both the instructor of that course and their department chairman. The student must then petition the Dean of the Graduate School for the desired credit, and must receive approval before or at the time of registration. Credit will not be given for undergraduate courses taken to make up deficiencies in the student's preparation for a graduate program of studies, nor will credit ordinarily be given for language courses that are not part of the student's program of studies. Under no circumstances may a student receive credit toward completion of degree or residence requirements for courses undertaken to aid in the completion of language requirements. Scholarship students may not apply their scholarships toward the remission of tuition for undergraduate courses taken to remedy deficiencies. The completed Program Card must be signed by the department chairman before submission at registration, and the department chairman will certify whether the program of study is full-time or part-time and, if part-time, whether one-quarter, one-half, or three-quarters time. Full-year courses must be re-entered at midyear. Students wishing to drop a full-year course at midyear must petition the Dean of the Graduate School for permission, after receiving the written approval of

the instructor of the course and of the chairman of their department. Students may not register at midyear for a full-year course without the written approval of the instructor of the course and their department chairman.

Program Cards are filed approximately two weeks after the opening days of instruction (see Academic Calendar for specific date) and are considered to be final.

## Auditing Courses

The privilege of auditing courses without fee is extended to all regularly enrolled graduate students except special students. Special students may audit courses by paying for them at the same rate as those taken for credit. No courses may be audited without the permission of the instructor. Auditors may not take examinations or expect evaluation from the instructor. No credit is given for an audited course.

## Change of Program

Only under unusual circumstances are students allowed to drop courses after filing their Program Cards. To do so, a Course Change Card is obtained from and returned to the Graduate School Registrar. Courses must be dropped no later than one week prior to the beginning of an examination period. Each course dropped is subject to a \$10 fee.

## Registration in Terms of Time

Advanced students — those who have completed two full years of residence, either by graduate work at Brandeis or by receiving credit for graduate work done elsewhere — may register in terms of time, subject to the signed approval of their department chairman. Their Program Cards must indicate that they are registering full-time or a specific fraction thereof (one-quarter, one-half, or three-quarters).

Registration in terms of time is a device that helps to individualize programs of study and permits increased freedom for independent research for advanced graduate students. Registration in terms of time frees students to pursue a program of study that partially accepts or bypasses altogether the system of formal courses, although students registering in terms of time will usually register for an advanced research or dissertation course. Their time will be spent in such research and reading as will be most beneficial to their development as scholars.

## Absence from Examinations

Students who are absent from a midyear or final examination without an accepted excuse will receive a failing grade for that examination. No students may be excused from such examination unless for emergency or medical reasons, nor may they be excused if they were able to notify the instructor in advance and failed to do so. Cases involving absence are referred to the chairman of the department who will decide whether a make-up examination shall be allowed, and who will notify the Dean of the Graduate School. The examination must be taken within six weeks of the opening of the next semester.

## Grades and Course Standards

Graduate students are expected to maintain records of distinction in all courses. Letter grades will be used in all courses in which grading is possible. Courses graded "non-credit" are those which carry no credit but which are required of the student. In thesis or research courses, if a letter grade cannot be given at the end of each semester or academic year, "Credit" or "No Credit" may be used.

"No Credit" and any letter grade below B minus are unsatisfactory grades in the Graduate School. A course in which the student receives an unsatisfactory grade will not be counted toward graduate credit.

At the end of each academic year the Registrar of the Graduate School will issue to each student a report of grades and of degree requirements satisfactorily completed.

## Incompletes

A student who has not completed the research or written work for any course may receive a grade of "Inc." (incomplete) or a grade of failure at the discretion of the instructor in the course. A student who receives a grade of "Inc." must satisfactorily complete the work of the course in which the "Inc." was given in order to receive credit for the course and a letter grade. An "Inc." unless given by reason of the student's failure to attend a final examination, must be made up no later than the end of the term following the term in which it was received. When failure to take a final examination has resulted in an "Inc.," resolution of that grade to a letter grade must occur within six weeks of the beginning of the next semester. If a student requires additional time to settle an incomplete grade, he or she may petition the Dean of the Graduate School for an extension of time, provided the petition is signed by the instructor of the course and by the department chairman. Such a petition must be filed prior to the expiration of the deadline for making up an incomplete.

## Credit for Work Done Elsewhere

Graduate level courses taken prior to matriculation at Brandeis University may not be counted toward fulfillment of the residence requirement for the Master of Arts degree, although a department may accept work taken elsewhere in partial fulfillment of specific course requirements for the degree. In that case, additional courses are designated to replace courses from which the student has been exempted.

A maximum of one term of residence credit for graduate level courses taken prior to matriculation may be counted toward fulfillment of the residence requirements for the Master of Fine Arts degree.

Students admitted to Ph.D. programs may file an application to have graduate level courses taken prior to matriculation counted toward fulfillment of residence requirements at this institution. A maximum of one year of residence credit may be granted.

Applicants for transfer credit will not necessarily be granted the credit requested. Each department reserves the right to require of any student work in excess of its minimum standards to assure thorough mastery of the area of study. In all cases, courses being transferred must carry a grade of "B" or better and must have been earned at an appropriately accredited institution.

After completing one term of residence at a full-time rate, or the equivalent at a part-time rate, students eligible to apply for transfer credit may do so. Forms are

obtained at the Graduate School Office and are submitted to the student's department for its approval. The form is then forwarded to the Dean of the Graduate School for final approval. The Dean will advise the applicant of any action taken.

Credit for work at another institution taken concurrently with studies in the Graduate School must be approved for potential transfer credit by both the student's department and the Dean of the Graduate School prior to registration for such courses. Such approval is granted only in unusual circumstances. Students who formally cross-register with Boston College, Boston University and/or Tufts University through the Consortium do not need prior approval.

## Residence Requirements

Residence requirements for all graduate degrees are computed by determining the amount of registration for credit and the tuition charges. Part-time students and teaching assistants pursuing part-time programs of study for credit complete their residence requirements when their fractional programs (one-quarter, one-half, three-quarters) total the amount required of a full-time student.

### Master of Arts

The minimum residence requirement for all students is one academic year on a full-time graduate credit program at the full tuition or the equivalent thereof in part-time study. Transfer credit may not be applied to residence requirements for the Master of Arts degree.

### Master of Fine Arts

The minimum residence requirement for all students in Music is three semesters at a full-time rate, at the full tuition rate for each semester, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

The minimum residence requirement for all students in Theater Arts is four semesters at a full-time rate, at the full tuition rate for each semester, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

### Doctor of Philosophy

The minimum residence requirement for all students is two academic years on a full-time graduate credit program for each year, at the full tuition rate for each year, or the equivalent thereof in part-time study. A maximum of one year's approved transfer credit may be granted toward residence for the Ph.D. degree.

## Full-Time Resident Students

A full-time student is one who devotes the entire time, during the course of the academic year, to a program of graduate work at Brandeis University, to the exclusion of any occupation or employment. In exceptional cases, however, a student may accept outside employment with the approval of the department chairman.

A full-time program may include a combination of teaching and research assistance, work leading to the fulfillment of degree requirements, such as preparation for qualifying, comprehensive, and final examinations, or supervised reading and research, or the writing of M.A. theses and Ph.D. dissertations, as well as regular course work.

A full-time resident student may take as many courses for credit in any semester as are approved by the department chairman, but no student may receive credit for, or be charged for, more than a full-time program in any semester. Thus the minimum residence requirement for any degree may not be satisfied by an accelerated program of study or by payment of more than the full-time tuition rate in any single academic year.

Ph.D. candidates and students for whom the M.A. and M.F.A. degrees are terminal degrees may continue as full-time students on completion of their residence requirements by registering at the post-residence fee rate (See p.12).

## Part-Time Resident Students

A part-time student is one who devotes less than the entire time to a program of graduate work at Brandeis University. Students may register for a credit program of one-quarter, one-half, or three-quarters time. A part-time student may engage in outside employment with the permission of the department chairman.

Students wishing to pursue part-time residence study leading to a graduate degree must explain in writing, at the time they seek admission, why full-time study is not possible. Students receiving financial aid from the University, who wish to change their status from full-time to part-time residency, must file with the Graduate School Office an explanation of why full-time study is no longer possible.

## Post-Resident Students

A graduate student who has completed residence requirements and who registers in order to utilize academic services or University facilities while completing degree requirements is a post-resident student.

## Fees and Expenses

### Special Students

Properly qualified persons who wish to audit or to take courses without working for a degree will be admitted. Special students are not eligible for University loans, scholarships, fellowships, teaching or research assistantships, nor will they be considered for resident counselorships. Special students who later wish to change their status to that of part-time or full-time students working for a degree must apply for admission as resident students. They must also file a special petition if they wish credit to be accepted for any courses taken at Brandeis as special students. Credit for such course work may be granted in exceptional cases.

### Leave of Absence

Students who have not completed their residence requirements may petition for leave of absence. The petition must have the approval of both the chairman of the department and the Dean of the Graduate School. Leaves of absence up to one year will normally be granted to students in good academic standing who present compelling personal reasons or need to do work off campus in connection with their graduate studies. Time spent on authorized leaves of absence will not be deducted from the maximum time permitted to complete degree requirements.

If for any reason a student must extend a leave of absence, he or she must request such extension in writing before the leave of absence expires. Failure to do so will result in being automatically dropped from the Graduate School roster.

### Continuation

Graduate students who have completed residence requirements and who are not registered during the period in which they are completing degree requirements are considered Continuation Students. A student in this category is not eligible for a leave of absence, except for reason of ill health. (See Fees, p. 12).

### Withdrawal

A student who wishes to withdraw from the Graduate School at any time before the end of the academic year must give immediate written notice to the department chairman and to the Dean of the Graduate School. Failure to comply may subject the student to dishonorable discharge, refusal of readmission, cancellation of the privilege of securing an official transcript and, in the case of a student withdrawing within 30 days of the beginning of classes, loss of eligibility for partial refund of tuition. Such a student must

pay tuition for the full semester. Permission to withdraw will not be granted if the student has not discharged all financial indebtedness to the University or has not made arrangements for subsequent payment to the satisfaction of the controller's office.

### Discipline

The disciplinary authority of the University is vested in the President of the University and, subject to his reserved powers, in the Dean of the Graduate School of Arts and Sciences and in the principal administrative officers, including the chairmen of the several graduate programs, in all cases involving graduate students.

Original jurisdiction in any case involving infraction of any rule or regulation or standard of conduct by a graduate student shall lie within the administrative officer of the University who is immediately concerned. Serious cases will be referred for hearing to the Disciplinary Committee of the Faculty Council of the Graduate School of Arts and Sciences, chaired by the Dean of the Graduate School. The chairman of the student's department shall be invited to attend any meeting at which such a case is discussed.

The Graduate Student Council has been invited to elect annually one graduate student from the School of Social Sciences, one student from the School of Science, and one student from the Schools of Creative Arts and Humanities, together to comprise a panel of three, who may form the Graduate School's Committee on Discipline to hear when the student who is being considered for disciplinary cases involving non-academic offenses when the student who is being considered for discipline so requests.

### Exclusion, Dismissal or Expulsion

The University reserves the right to dismiss or exclude at any time any student whose character, conduct, academic standing or financial indebtedness it regards as undesirable, through disciplinary procedures established in the Graduate School. Neither the University nor any of its trustees or officers shall be under any liability whatsoever for its disciplinary action, exclusion or dismissal.

The University also reserves the right to revoke, cancel or reduce at any time any financial or honorific award made to any graduate student, for character, conduct, academic standing or financial indebtedness regarded by the University as undesirable; neither the University nor any of its trustees or officers shall be under any liability whatsoever for cancelling, revoking or reducing any award.

Payment of tuition and other fees due on the day of registration is a part of the registration procedure. A student who is not prepared to pay such fees on the day of registration will be refused the privilege of registration.

A student who defaults in the payment of indebtedness to the University shall be subject to suspension, dismissal, and refusal of a transfer of credits or issuance of a transcript.

Such indebtedness includes, but is not limited to, delinquency of a borrower in repaying a loan administered by the Student Loan Office, and the inability of that office to collect such a loan because the borrower has discharged the indebtedness through bankruptcy proceedings. If the student is a degree candidate, his or her name will be stricken from the rolls.

A student who has been suspended or dismissed for nonpayment of indebtedness to the University may not be reinstated until such indebtedness is paid in full.

**Application Fee:** \$25. Payable by all applicants for admission at the time the application for admission is submitted. It is not refundable. Checks and money orders should be made payable to Brandeis University. No application for admission will be processed until this fee is paid. This fee is not required of Brandeis graduates.

**Tuition Fee:** The fees for tuition in the Graduate School for 1984-85 are as follows:

Full-time resident students: \$9,350 per year, or \$4,675 per term.

Part-time resident students:

Per Term	Per Year	Fraction Program of Study
\$3,506.25	\$7,012.50	Three-quarters
\$2,337.50	\$4,675.00	One-half
\$1,168.75	\$2,337.50	One-quarter

Special Students: \$1,170.00 per course per term.

In view of the constantly increasing costs of education, students may expect one or more tuition increases during their academic careers.

**Post-Residence Fee:** Students who have completed their residence requirements and who wish to continue in residence to utilize any academic service or University facility must register at the usual tuition rates.

Graduate students whose tuition is not being paid from scholarship or fellowship funds awarded by the University or other sources may petition the Dean of the Graduate School for a reduction of the post-residence fee to \$725. Students who continue to utilize any academic service or University facility after having completed residence, but who have failed to register, are subject to disciplinary action by the Dean of the Graduate School. A student who is eligible for registration on the post-residence basis may file a Program Card for full-time study, in terms of courses or in terms of time or any combination thereof, provided the department chairman approves of the program of study as being a full-time program and signs the Program Card.

**Mixed Tuition Fee:** In the event that a student needs to register for only a part-time program (one-quarter, one-half, or three-quarters) in order to complete residence requirements, but wishes to register for additional courses or take a fuller program of study, he or she shall be charged for the part-time program needed to complete residence, plus the post-residence fee.

**Late Registration Fee:** \$10. Payable for failure to complete registration at the time announced by the Graduate School Office.

**Change-of-Program Fee:** \$10. Payable by any graduate student who wishes to drop or add a course after filing Study Cards.

**Incomplete Records Fee:** \$25. Payable for failure to complete administrative requirements by date(s) specified in the Academic Calendar and/or Catalog (e.g., late filing of Health Examination Report, failure to register, etc.).

**Continuation Fee:** \$20. Payable annually by graduate students who have completed residence requirements and who are not registered during the period in which they are preparing for the completion of degree requirements. Students in this category are not eligible for leaves of absence.

**Master's Fee:** \$50. A candidate for the M.A. or the M.F.A. who is subject to the Continuation Fee and who earns a degree in any semester following one in which he or she has not been in residence, shall pay the Master's Fee. The fee is chargeable only once.

**Final Doctoral Fee:** \$250. This fee covers all costs for the year in which the Ph.D. degree will be conferred, including the costs for the microfilm publication of the dissertation, publication of the abstract of the dissertation in *Dissertation Abstracts*, issuance of a Library of Congress number and appropriate library cards, binding two copies of the dissertation, one for use in the University Library, and one Xerox-printed copy in book form for the author. The Final Doctoral Fee covers the rental expenses for academic robes for graduation and the cost of the diploma. Students who have been in residence in their final year may deduct any tuition charges which they may have paid to the University in that final year. Students who have paid the Continuation Fee in the final year may deduct that fee from the Final Doctoral Fee.

**NOTE:** All candidates for the Ph.D. degree must pay the \$250 Final Doctoral Fee prior to the receipt of their degrees.

**Reinstatement Fee:** \$10. Payable by a student who, after withdrawal, suspension or dismissal, has been reinstated with the consent of the Dean of the Graduate School.

**Transcript Fee:** \$2. Students, former students, and graduates who request official transcripts of their records in the Graduate School are charged \$2 for each copy issued after the first one, which is free. Requests by mail for transcripts must be accompanied by a check in the correct amount, payable to Brandeis University. Transcripts will be issued only to those students whose university financial records are in order.

**Diploma Fee:** \$10. Payable by candidates for the M.A. and M.F.A. degrees.

**Student Health Fee:** \$180. Entitles the graduate student to use of the Health Services.

**Student Insurance Fee:** \$235. Payment of the Insurance Fee entitles the graduate student to participate in the benefits of the Health Insurance Program. The fee is payable at registration and no portion is refundable. Student insurance is optional for Special Students.

**Dependent Insurance Coverage:** Although the health services offered at Stoneman Infirmary are not extended to dependents of students, an optional family health insurance plan is available to married students for a fee of \$570. Special Students are not eligible for this plan.

**Parking Fee:** \$5-\$35. Payable annually at fall registration for privilege of parking an automobile on campus. Fee varies with assigned parking area.

## Refunds

The only fee which may be refundable, in part, is the tuition fee. No refund of the tuition fee will be made because of illness, absence or dismissal during the academic year. If a student withdraws, he or she may petition the Dean of the Graduate School for a partial refund of tuition in accordance with the following:

### 1. Tuition:

Withdrawal: before the opening day of instruction: 100% of semester tuition. On or before the second Friday following the opening day of instruction: 75% of semester tuition.

On or before the fifth Friday following the opening day of instruction: 50% of semester tuition.

After the fifth Friday following the opening day of instruction: no refund.

**2. Scholarship:** In the case of a scholarship student who withdraws, the student's account will be credited with the same proportion of the semester scholarship as charged for tuition: 25% if the student leaves on or before the second Friday; 50% on or before the fifth Friday; and, 100% thereafter. The balance of the scholarship will be cancelled.

All refunds are subject to review and final approval by the University Controller.

## Financial Assistance

To help students whose records indicate scholarly promise, the University makes available special scholarships and fellowships and a variety of awards and work opportunities. No student is eligible for aid without filing with the Graduate School Office a standard financial aid form (GAPSFAS). All scholarships and fellowships are granted for one academic year; therefore, a registered student who holds a scholarship or fellowship must apply annually for a renewal by filing the "Application for Financial Assistance."

All awards are granted and accepted with the understanding that they may be revoked or reduced at any time for undesirable conduct or poor academic standing.

Ordinarily, no student may hold a fellowship, scholarship, or teaching assistantship for more than two years of study for the M.A. degree, for more than three years of study for the M.F.A. degree, or for more than four years of study for the Ph.D. degree. Ordinarily, no student may receive a scholarship, fellowship, or teaching assistantship after one year of study at the post-residence fee. Priority in making awards is given to full-time students and teaching assistants.

In the case of a student receiving financial aid from Brandeis University, whether in the form of a teaching assistantship, scholarship or fellowship, the approval of the Dean of the Graduate School is required, in addition to the approval of the department chairman, before the student may engage in outside employment.

### Scholarships

A scholarship is an award, on grounds of scholarly ability and need, of financial credit that will be used exclusively for remission of tuition fees. Full scholarships and partial scholarships are available. Scholarship students are liable for all but tuition charges.

### Fellowships

A fellowship is an academic award of honor to outstanding students of good character to help them in furthering advanced study and research. The amount of the stipend depends on the quality of the student's record and performance; need is also considered in most cases. A fellowship recipient must pay tuition fees unless the award includes a scholarship in an amount covering tuition. No services are required of students for fellowship or scholarship awards.

### Teaching Assistantships

Teaching assistants are resident students in the Graduate School who do part-time teaching as part of their training and are paid. The University has established teaching assistantships to enable distinguished graduate students to gain teaching experience while continuing their studies. Teaching assistants are eligible for other awards, including scholarships and fellowships.

Teaching assistantship appointments are made on the authority of the President of the University by the Dean of the Graduate School who, in turn, acts on the recommendation of a student's department chairman. Appointments are made for periods of one year or one semester, but are renewable. All awards of teaching assistantships to incoming students are conditioned on an interview with a University representative, prior to registration. The University reserves the right to terminate any appointment at any time for due cause. Conduct, character or academic standing that is regarded as undesirable may constitute cause, but the University need not assign any reason for the termination of an appointment at any time. All teaching assistantship appointments are made and accepted with this understanding, and neither the University nor any of its trustees or officers shall be under any liability whatsoever for the summary termination of a teaching assistantship.

### Research Assistantships

Research assistantships are available in the science areas. First-year graduate students are not normally eligible for appointment. Application should be made to the chairman of the department or the committee administering the graduate program.

### Loans

Guaranteed Student Loan Program (GSLP). A student may be eligible for a guaranteed student loan if he or she meets the following requirements: (1) is accepted for enrollment or is attending Brandeis University and is in good standing as determined by the University; (2) is carrying at least one-half the normal full-time work load; (3) is a citizen or national of the United States or is in the United States for other than a temporary purpose; (4) can demonstrate need. An eligible student may be able to borrow up to \$5,000 in any academic year at a 9% interest rate, and does not have to begin repayment until six months after he/she ceases to be at least a half-time student. The total amount a student may borrow under the Guaranteed Student Loan Program, including both undergraduate and graduate school loans, may not exceed \$25,000. Special Students are normally ineligible for such loans.

Information and applications for this program are available from banks, savings and loan associations and credit unions.

Students who plan to borrow through one of the participating sources must have on file at the Graduate School Office a current Graduate and Professional Student Financial Aid Service form (GAPSFAS). Forms may be obtained at the Graduate School Office or from the Educational Testing Service, Princeton, N.J. 08541

### Resident Counselorships

A limited number of positions is available for both married and unmarried men and women as counselors in the University residence halls. Applications may be obtained from the University Housing Office and should be returned no later than March 15. Appointments are made by the Director of University Housing on or about June 1.

### Office of Student Employment

The Office of Student Employment assists students who need and desire part-time work. Students seeking part-time work should register with the Office of Student Employment. New students are not assigned part-time work prior to arrival on campus.

## Student Services

### Housing

Brandeis University has a limited number of apartment units available for single and married graduate students. All apartments are within easy walking distance of the campus. These include efficiency, one and two bedroom unfurnished apartments as well as efficiency and one bedroom furnished apartments. Single students may rent a space in an apartment and request the Graduate Housing Office assign a roommate. The one bedroom apartments are particularly designed to allow use as two separate bedrooms with a common kitchen and bathroom. Early application for housing is encouraged.

Information, rental rates and copies of the housing contract may be obtained by writing to the Office of Residence Life and University Housing, Brandeis University, Waltham, Massachusetts 02254.

In addition, the Graduate Housing Office maintains Off-Campus Housing Services (OCHS). OCHS has extensive listings of available housing in the area, a list of Realtors who may be helpful in a search for housing, and descriptions and information about nearby neighborhoods and towns. OCHS does not serve as a real estate agent, but rather as a resource to help in locating housing.

### Dining Facilities

Graduate students may sign meal contracts for varying numbers of meals or buy cash meal books. Arrangements for these contracts are made at the Food Director's Office in Kutz Hall. A kosher kitchen is also maintained. Individual meals and light snacks may be purchased at Usdan Student Center.

### Health Services

Because health and medical care are an integral part of the University experience, the University Health Services provides a program of comprehensive medical and emotional care. An optional Health Participation Fee entitles students to medical services available at Mailman House without additional charge during the academic year. The annual health fee does not pay for off-campus medical consultations, dental care, medications, laboratory tests, drugs, x-rays, reusable supplies or admission to the University's hospital, Stoneham Infirmary, and students are responsible for these charges.

In addition, each student is required to have personal health insurance. The student may elect to participate in the Student Health Insurance Plan offered through the University, underwritten by the Boston Mutual Life Insurance Company, or may substitute membership in another plan.

Except for limited day care facilities, the Health Services and the use of the Stoneham Infirmary are available to students only during the period in which the University is in regular academic session.

Prospective students planning to matriculate in the college and graduate schools must submit a Health Examination Report completed by the family or personal physician prior to registration. In addition to information about previous health and details of the physical examination, evidence of immunization against tetanus, polio, measles, mumps and rubella are required. Since students may not register until the requirements have been satisfied, it is strongly recommended that the Health Examination Report be submitted by July 1.

The Student Health Insurance Plan is designed to defray expenses of those situations which are beyond the scope of the Health Services; for example, laboratory and x-ray examinations, as well as hospitalization for illnesses or accidents of a more serious nature. The Plan extends for a full calendar year commencing with the first day of the academic year.

A detailed brochure of the services offered by the University Health Services as well as an outline of the details of the Plan is mailed to students. Students and parents are urged to read this brochure carefully and keep it for reference. This brochure includes a statement of patients' rights in Health Services.

Whereas situations not covered within the Health Services or by the Insurance Plan are infrequent, in awareness of these possibilities will lessen misunderstanding and disappointment.

In such instances, students and their parents are responsible for expenses which are not covered by the University's health program or its associated insurance policy. Similarly, students and their parents are responsible for expenses which are not covered by alternative insurance programs substituted for the Brandeis University Student Health Insurance Plan.

### Psychological Counseling Center — Mailman House

The Psychological Counseling Center, a part of the University Health Services, is located in Mailman House. At the Center, a professionally trained staff provides a range of counseling and psychological services designed to enhance personal development of students and to assist those who are experiencing personal or emotional problems. Individual counseling and brief psychotherapy are available both to undergraduate and graduate students; group therapy is also available on a limited basis. Students can make an appointment to see a counselor by applying directly to the Counseling Center office on the second floor of Mailman House.

### Office of International Programs

This office serves as the counseling center for students who come here from other countries. It advises students of special social and educational activities and provides assistance in fulfilling the legal procedures required by the U.S. Immigration Service to obtain working permits and documents necessary for extended periods of study, and in other technical matters which may arise (See Page 7 )

In addition, the office provides the Brandeis community with information on academic opportunities abroad such as Fulbright grants for graduate students and faculty, the Watson Fellowships and Rhodes Scholarships for seniors being graduated, the Abram L. Sachar International Fellowship Program, and the Jacob Hiatt Institute for study in Israel. American students wishing to study abroad on University-accredited programs should consult this office.

## Academic Schools, Research Centers and Institutes

### Crown School of Graduate Studies in American Civilization

The school's primary objective is to support gifted students in their work toward a doctorate in the History of American Civilization. Crown Fellowships are granted occasionally to special students on the Brandeis campus from both the United States and abroad who are drawn from important facets of public life including the media and the foreign service.

### Danielsen School of Philosophy, Ethics, and Religious Thought

The school includes the Department of Philosophy, which places traditional emphasis on logic, epistemology, metaphysics, value theory and the history of philosophy. The advancement of philosophical thought in the context of contemporary issues is encouraged through scholarly and interdisciplinary approaches. One of several endowed professorships in the school is the Albert V. Danielsen Chair in Christian Thought.

### Fierman School of Chemistry

The school of chemistry incorporates graduate and undergraduate programs, offering highly diverse and advanced research activities as well as lecture programs and colloquia. The school has been aided by grants from the National Institutes of Health, National Science Foundation, Energy and Research Development, Administration, Research Corporation, and Petroleum Research Foundation. Research conducted under these agencies has been published in over 700 papers in leading professional journals.

### Fisher School of Physics

The school encompasses both theoretical and experimental physics on the graduate and undergraduate levels and provides a setting for lectures and colloquia. Grants from agencies including the National Science Foundation and the Atomic Energy Commission support research programs in the Fisher School.

### Kutz School of Biology

The school of embodies the university's undergraduate and graduate biology departments. The curriculum is designed to teach at the molecular and cellular levels, and to present a comprehensive body of courses with special attention to current discoveries and experimentation. Students are encouraged to engage in original research and independent study. A major portion of the governmental, industrial, and private

research grants awarded to Brandeis is devoted to varied projects in biology and health sciences.

### Lown School of Near Eastern and Judaic Studies

The school encompasses an intensive teaching and research program in all the main areas of Judaic Studies, the Ancient Near East and the Modern Middle East. In addition, the Lown School has programs which prepare students for Jewish communal service and programs of research in areas of direct concern to the American Jewish community.

The Department of Near Eastern and Judaic Studies is the primary teaching and research unit in the Lown School. In this department the university has assembled an unusual array of distinguished scholars who offer an extremely broad curriculum. A second unit in the Lown School is the Benjamin S. Hornstein Program in Jewish Communal Service which provides graduate education for students interested in professional careers in Jewish communal service and Jewish education. The school also includes the Center for Modern Jewish Studies which is devoted to the study of contemporary Jewish life. The center currently engages in research and teaching in three major areas: population studies, Jewish identity, and the family.

### Benjamin Michtom School in Computer Science

The Benjamin Michtom School in Computer Science encompasses a recently expanded, state-of-the-art, computer science program incorporating undergraduate instructional and internationally recognized research programs in the areas of computer science of theory, languages, systems, and artificial intelligence. The computer science program, interdisciplinary in setup, fosters links on campus between the Mathematics and Physics departments as well as the newly created Cognitive Science Program.

### Rosenstiel Basic Medical Sciences Research Center

The center is one of the nation's leading centers for research programs in the basic medical sciences embracing work in biochemistry, biology, chemistry, microbiology, physics, biophysics and immunology. Staff members are jointly appointed to the Brandeis faculty basic science departments. The center invites participation of distinguished scholars and medical scientists, offers hospital to younger researchers at the undergraduate and fellowship level, sponsors symposia and colloquia and underwrites scholarly publications.

The Rosenstiel Basic Medical Sciences Center Research contains sophisticated scientific equipment and facilities. Through cooperative programming, both with departments at Brandeis and in the Boston area, the center has broadened the scope of basic medical sciences research offerings at Brandeis. Grants from such agencies as the National Science Foundation, National Institutes of Health, and American Cancer Society, among others, support research programs in the Rosenstiel Center.

The center sponsors the annual presentation of the Lewis S. Rosenstiel Award to recognize distinguished work in basic medical research.

### Swig School of Political Science

The school, which includes the university's Department of Politics, offers a wide range of courses in American government, international relations, theory, methodology, and comparative politics.

Several endowed academic chairs in the school include the Harry S. Truman Chair in American Civilization; the Earl Warren Chair in American Constitutional Studies; the Christian A. Herter Chair in International Relations; and the Adlai E. Stevenson Chair in International Politics.

### The Tauber Institute

The Tauber Institute is an independent, multidisciplinary research institute that seeks to set into the context of modern history the causes, nature and consequences of the crisis of European society in the second quarter of the twentieth century with a particular focus on the origins of the European Jewish catastrophe. The institute undertakes research into broad aspects of modern European intellectual, diplomatic, social, and political history. Among the areas of study with which it is concerned are: nationalism and racialism in modern Europe, European Jewish history since the Enlightenment, refugee problems, and the roots and development of Nazism, fascism, and anti-Semitism. The institute is engaged in both research and teaching. Its government includes a distinguished Board of Overseers. Distinguished scholars are invited to visit the institute. It also awards fellowships for advanced doctoral study and for postdoctoral research. Lectures, symposia and conferences are arranged under the auspices of the institute which initiates and sponsors major research projects.

## Areas of Study and Courses — 1984-1985

All courses meet for three hours a week unless the course description indicates otherwise. The presence of "a" in the course number indicates a half course given in the Fall Term; "AA" indicates a full course given in the Fall Term; "b" indicates a half course given in the Spring Term; "bB" indicates a full course given in the Spring Term; "aR" indicates a course given in the Spring Term; "bR," a course given in the Fall Term which is identical with an "a" or "b" course of the

same number given in the Fall and Spring Terms respectively; the use of "c" after a course number indicates that the course is given as a half course but meets throughout the year.

The University reserves the right to make any changes in the offerings without prior notice. Faculty and course listings are accurate as of June 1, 1984.

□Course not offered for 1984-1985.

## American Civilization

See History of American Civilization

## Anthropology

### Objectives

The graduate program in anthropology, leading to the degree of Doctor of Philosophy, is designed to produce scholars who will be broaden our knowledge of culture and society. Admission is limited to students whose primary interests lie within the fields of social and cultural anthropology or archaeology. Most graduates of the program accept appointments at colleges and universities, although a number take employment in government, private institutions or foundations. Intensive training for independent research is stressed, with particular emphasis on comparative studies and fieldwork.

### Admission

The general requirements for admission to Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Students need not have an undergraduate major in anthropology or sociology-anthropology. If admitted, however, the student without previous training in anthropology may be required to take additional courses, as determined by the department, to complete his or her residence requirements. Students should have a reading knowledge of one foreign language.

### Faculty

Associate Professor  
**David E. Jacobson,**  
Chair:  
Social anthropology.  
Medical anthropology.  
Support systems.  
U.S.A. Africa.

Professor  
**George L. Cowgill:**  
Mathematical and  
computer methods in  
archaeology. Meso-  
american civilizations.  
Origins of early states.  
Population  
anthropology.

Professor  
**David Kaplan:**  
Economics. Method  
and theory. Peasant  
cultures. Middle  
America.

Professor  
**Marguerite S.**  
**Robinson:**  
Social organization.  
Anthropology and  
public policy. Rural  
development. South  
and Southeast Asia.

Associate Professor  
**Robert C. Hunt:**  
Social anthropology.  
Modernization. Irriga-  
tion agriculture.  
Mesoamerica.

Associate Professor  
**Thelma T. Irvine:**  
Ethnography of com-  
munication. Linguistics.  
Social stratification.  
Africa.

Associate Professor  
**Benson Saler:**  
Comparative religion  
and folk philosophies.  
Psychological anthro-  
pology. Mesoamerica.  
South America. Pas-  
toral peoples.

Assistant Professor  
**D. Neil Comberg:**  
Physical anthropol-  
ogy. Comparative  
anatomy. Primate  
studies. Human  
evolution.

Assistant Professor  
**Pierre-Yves Jacquin:**  
Myth and ritual.  
Social organization.  
Symbolic anthropol-  
ogy. Cross-cultural  
child psychology.  
Egalitarian societies.  
South America.  
Europe.

Assistant Professor  
**Judith F. Zeitlin:**  
Cultural ecology.  
Archaeological  
method and theory.  
Mesoamerica.  
Ethnohistory.

Assistant Professor  
**Robert N. Zeitlin:**  
Sociocultural evolu-  
tion. Prehistoric  
exchange. Pre-state  
societies. Archaeolog-  
ical method and the-  
ory. Mesoamerica.

Lecturer  
**David W. Murray:**  
Social and cultural  
anthropology. Sym-  
bolic anthropology.  
Linguistics. North  
American Indians.

### Research Associates

**George N. Appell:**  
Social anthropology.  
Southeast Asia.

**Clemency Coggins:**  
Prehistoric art and  
archaeology of  
Mesoamerica, lower  
Central America and  
Peru.

**Michael Folsom:**  
Industrial archaeol-  
ogy. New England.

**Charles A. Ziegler:**  
Industrial and applied  
anthropology.

## Degree Requirements

### Master of Arts

Ordinarily students are admitted for the doctoral program only. However, the Master of Arts degree in anthropology will be awarded to those students who have successfully fulfilled the minimum residence requirements set by the Graduate School and have met the following requirements: 1) Of the eight half-courses to be completed satisfactorily, one must be the first segment of the linguistics sequence, and one must be either of the special graduate courses in archaeology or physical anthropology; 2) If the student will not be continuing toward a Ph.D., he or she must also pass an M.A. qualifying examination, must demonstrate reading proficiency in a foreign language, and must submit an acceptable master's thesis (for doctoral students the Specialist Essay, described below, may substitute for the thesis component in the awarding of an M.A.).

### Qualifying Examination.

which formal cross-registration arrangements are in effect. In any case, a maximum of one year of residence credit is allowed by the Graduate School for work completed elsewhere.

At the end of sixteen half-courses students take a General Examination which tests for overall mastery of the subject matter. Upon passing the General Examination, work begins on a Specialist Essay, normally focused on theoretical and/or topical issues of relevance to the forthcoming dissertation. The purpose of the Specialist Essay is to demonstrate a capacity for independent research of high quality. By the end of the third year of study, the essay should be complete, language requirements satisfied, and a proposal for dissertation research drawn up.

### Language Requirement.

A reading knowledge of at least one foreign language must be demonstrated by examination and by writing a research paper or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D.

### Summer Training Program.

Contingent upon the availability of funding, a program of fieldwork under faculty supervision is carried out during the summer following a student's first year of residence.

### Admission to Candidacy.

A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) sixteen half-courses, including all the required courses, 2) a General Examination in anthropology, 3) the reading examination in a foreign language, and 4) the Specialist Essay.

### Dissertation Research.

As soon as possible after admission to candidacy, the student should begin at least a full year of research consisting of fieldwork and/or laboratory analysis. In exceptional cases library research may be substituted. This research forms the basis for a doctoral dissertation.

### Dissertation and Defense.

The department will recommend to the Dean of the Graduate School that a Ph.D. be awarded the candidate upon formal acceptance of a dissertation and after its successful defense in Final Oral Examination. Details of the regulations for certifying approval of the dissertation and for the Final Oral Examination are found in earlier pages of this catalog.

**Doctor of Philosophy**  
Program of Study.

Flexibility of curriculum enables the student to organize a program of study around his or her particular anthropological interests. At the same time, the doctoral program is structured so that a broad familiarity with other aspects of the discipline is achieved.

At the outset an adviser is assigned each matriculant, but by the end of the second semester of study a student is expected to recruit two members of the faculty for a permanent advisory committee. In soliciting potential committee members, the student should be guided by interest and specialization. Once established, the committee is responsible, through regular meetings and informal consultation, for 1) guiding the student in the selection of suitable courses, 2) providing advice in the formulation of a dissertation research project, and 3) supervising the student's progress through the program.

With respect to formal course requirements, all students not exempted by virtue of previous graduate training must complete the four core courses in social organization and anthropological theory, a special one-semester seminar in archaeology, another in physical anthropology, and a two-semester course sequence in anthropological linguistics. Students concentrating in archaeology may substitute the one-semester course for the linguistics (Linguistics 102) requirement. Through course work and outside reading it is expected that students will attain a high degree of scholarly competence in at least one culture area and one topical field study.

The department may, at its discretion, grant a student transfer credit for graduate courses completed with a b grade or better at another accredited institution. Requests for transfer credit will not be considered, however, until at least one semester of study has been completed at Brandeis. Prior approval is not needed for courses taken at Boston College, Boston University and Tufts University, for

## Courses of Instruction

Anthropology 100a. <b>Introduction to Linguistics</b>	See Linguistics 100a. Ms. Maling and Irvine	Anthropology 107a. <b>Human Disease Ecology</b>	This course is a general treatment of medical ecology. Topics include a basic introduction to epidemiology, disease evolution, disease and development, and malnutrition and disease. Special attention will be paid throughout the course to the interaction of culture and disease, and several examples of changing patterns of disease associated with cultural change will be examined in detail. Mr. Comberg
Anthropology 101b. <b>Medical Anthropology</b>	The purpose of this course is to study the relationship between stress and mental health and physical well-being. It will look at the connection between crises and the "natural" support systems for those undergoing transitions such as becoming a parent, losing a job, getting divorced, entering college, and bereavement. The conditions which influence the availability and use of support will be considered. Important aspects of this course will be to discuss the concepts of stress and support and to review research concerning relationships between crises, support and coping behavior. Mr. Jacobson	Anthropology 108b. <b>Greek Mythology</b>	Initiation into the fantastic world of Greek mythology. Studying a wide range of myths, many unfamiliar and not in literary sources, this course will introduce procedural and conceptual tools to reveal their symbolic meaning. The myths will be situated in their proper cultural, aesthetic, and historical contexts. The course ends with the contribution of Greeks to the end of mythological thought and the birth of scientific thought. Messrs. Jacopin and Muellner
Anthropology 102a. <b>Anthropological Linguistics I</b>	A general introduction to anthropological perspectives on language. Topics will include: the organization of language as a communicative system; language in human evolution; linguistic approaches to cultural meaning and world-view; historical perspectives on language (language change, history and pre-history). Ms. Irvine	Anthropology 109b. <b>Archaeological Methods</b>	An introduction to the methods of archaeology, emphasizing procedures for designing and conducting field and laboratory research. No prior background is assumed. The course provides the basic training for participation in archaeological fieldwork or laboratory projects. Topics to be covered include: methods for surveying, sampling, mapping and excavating archaeological sites; techniques for identifying, classifying, dating, and preserving archaeological remains; and principles for interpreting the significance of finds. Weather permitting, it is hoped that some fieldwork at a local archaeological site can be arranged to provide first-hand experience in excavation, mapping, and surface survey. Mr. R. Zeitlin
Anthropology 102b. <b>Anthropological Linguistics II</b>	Advanced topics in anthropological linguistics. The course will focus on three areas: 1) linguistics fieldwork and the analysis of unfamiliar language; 2) linguistic variation and social structure; 3) current issues in semantics and pragmatics (the relation between meaning and use in cross-cultural perspective). Ms. Irvine	Anthropology 110a. <b>Introduction to Human Evolution</b>	Mr. Comberg
Anthropology 103bR. <b>Language, Society and Culture</b>	A comparative study of social and cultural aspects of language. Topics to be explored include: what kinds of social groups contrast in their use of language? How does a person's speech contribute to the impression he/she makes on other people? How is conversation organized, and to what purpose? Students conduct a fieldwork project on speech in their own social milieu. Ms. Irvine	Anthropology 110b. <b>Introduction to Human Evolution</b>	<input type="checkbox"/> Not offered 1984-1985
Anthropology 105a. <b>Symbol, Myth and Ritual</b>	<input type="checkbox"/> Not offered 1984-1985	Anthropology 111a. <b>Introduction to Primate Studies</b>	<input type="checkbox"/> Not offered 1984-1985
		Anthropology 112b. <b>Evolution and Natural Selection</b>	<input type="checkbox"/> Not offered 1984-1985

Anthropology 113aR. <b>Human Variation</b>	<input type="checkbox"/> Not offered 1984-1985	Anthropology 125b. <b>Investigations in an Unfamiliar Language</b>	Using a native speaker of an unfamiliar language (such as Turkish or Anharic) as a source of data, the class will investigate the structure of the language and compare it with the structure of English and other familiar languages. This year's course will include training in phonetics and transcription. May be repeated for credit.
Anthropology 115a. <b>Biocultural Adaptation</b>	<input type="checkbox"/> Not offered 1984-1985.		Ms. Irvine
Anthropology 116a. <b>Human Osteology</b>	This course is an introduction to human musculo-skeletal anatomy. After learning the names and locations of the major bones and muscle groups, the manner in which these anatomical structures interact to produce movement will be examined. Movements at each of the major joints of the human body will be discussed and integrated into an analysis of human locomotion and posture.  Mr. Gomberg		
Anthropology 118b. <b>History of Anthropological Theory</b>	This course examines the intellectual precursors of the discipline of anthropology, and then traces the development of the major modern schools. How was "mankind" as an intellectual object created? In predominantly lecture format, the course will be concerned with the social context of the beginning of anthropology, and will identify the seminal thinkers and perennial issues they addressed. These issues will be pursued into their modern forms in the American, British, and French schools.  Mr. Murray	Anthropology 126a. <b>Kinship</b>	<input type="checkbox"/> Not offered 1984-1985
Anthropology 119a. <b>Conquest and Colonialism in Native Latin America</b>	An often overlooked topic in Latin American studies is an examination of the impact that Spanish and Portuguese and colonialism has had on the original inhabitants of the Americas. Within a hundred years after the Conquest, the once dense Indian populations had been reduced by as much as 90% and great imperial states like those of the Aztecs and Incas were transformed into a subjugated peasantry. In this course we will trace the historical development of post-Conquest Indian society, from the policies and cultural institutions of Iberian colonialism through the complex ethnic and economic interactions of different native groups within the modern nation states of lowland South America living on the last frontier of colonialism.  Ms. Zeitlin	Anthropology 128b. <b>The Provisioning of Cities</b>	That cities must be provisioned with food, water and fuel is self-evident: how they do it is not. Successful and sustained provisioning is a complex system of ecological, political, economic social and cultural constraints and implications. In this course specific attention is paid to agricultural productivity, the technology of storage and transport, urban-rural terms of trade, and the very complex mixtures of distribution systems in cities. The mutual relevance of the various problems and their solutions is stressed. We will use concepts from several disciplines, and data from many times and places, including classical Rome, West Africa, colonial Mexico and modern times.  Mr. Hunt
Anthropology 121b. <b>The Anthropology of Law</b>	<input type="checkbox"/> Not offered 1984-1985	Anthropology 131. <b>The Archaeology of Anatolia</b>	<input type="checkbox"/> Not offered 1984-1985
Anthropology 123aR. <b>Directions and Issues in Archaeology</b>	An examination of the concepts involved in archaeological study of prehistoric societies. Selected cases will be discussed as illustrations of major theoretical and methodological issues.  Permission of instructor required.  Mr. Cowgill	Anthropology 133b. <b>Anthropological Fieldwork</b>	<input type="checkbox"/> Not offered 1984-1985
		Anthropology 135b. <b>Peoples and Cultures of India</b>	An introduction to patterns of thought and action in rural India, with special emphasis on Hindu communities.  Ms. Robinson

Anthropology 140a. <b>North American Indians Before the Europeans</b>	<input type="checkbox"/> Not offered 1984-1985.	Anthropology 151b. <b>Social Organization II</b>	A continuation of 151a. This course will emphasize structural analysis. Designed primarily for advanced undergraduate and graduate students.
Anthropology 141b. <b>The American Indian</b>	<input type="checkbox"/> Not offered 1984-1985.	Mr. Hunt	
Anthropology 142b. <b>Population and Social Change</b>	<input type="checkbox"/> Not offered 1984-1985	Anthropology 152b. <b>Comparative Political Economy</b>	<input type="checkbox"/> Not offered 1984-1985
Anthropology 145a. <b>Seminar in Mesoamerican Archaeology and Ethnohistory</b>	<input type="checkbox"/> Not offered 1984-1985	Anthropology 153a. <b>Primitive Art</b>	<input type="checkbox"/> Not offered 1984-1985
Anthropology 146a. <b>Environment and Archaeology</b>	<input type="checkbox"/> Not offered 1984-1985	Anthropology 154a. <b>Comparative Religion</b>	An explosion of world view and ritual both in "world" or "historical" faiths (such as Buddhism and Islam) and in so-called "primitive" societies with reference to theories concerning the origins and functions of religion
Anthropology 147bR. <b>The Rise of Mesoamerican Civilization</b>	We will examine the area of ancient high civilization lying between what is now Mexico and western Central America. From simple ice age beginnings to an abortive end through Spanish conquest, Mesoamerican civilization has been a subject of intense fascination to scholars interested in the development of complex societies. The course considers ways that environment, population growth, social structure, religion, ideology and other factors may have been related to the unprecedented achievements of its indigenous peoples — the Olmec, Teotihuacan, Maya, Zapotec, Aztec and others. In so doing, we may gain a better appreciation of the processes leading to the rise and decline of civilizations everywhere.	Mr. Saler	Mr. Saler
	Mr. R. Zeitlin	Anthropology 154b. <b>Selected Topics in Comparative Religion</b>	Reading and discussion of works by W.R. Smith, E.B. Tylor, William James, Sigmund Freud, Emile Durkheim and Max Weber.
		Anthropology 155b. <b>Psychological Anthropology</b>	<input type="checkbox"/> Not offered 1984-1985
		Anthropology 156a. <b>Political Anthropology</b>	<input type="checkbox"/> Not offered 1984-1985.
Anthropology 148aR. <b>Rise, Function and Fall of Early Civilizations: Concepts and Explanations</b>	Regularities in the way large-scale non-modern societies work — and fail to work. Why did large-scale societies develop at all? Why and how did they collapse? Ethnographic and historical data and leading anthropological theories will be reviewed, as well as archaeological evidence from Mesoamerica, China, Egypt and Peru.	Anthropology 158a. <b>Urban Anthropology</b>	A survey of major anthropological approaches to the study of politics.
	Mr. Cowgill	Mr. Jacobson	
Anthropology 151a. <b>Social Organization I</b>	Theories of social organization, the interrelations of social institutions, current anthropological methods of interpretation and analysis.	Anthropology 161bR. <b>Culture and Cognition</b>	What relationship is there between cognitive processes and cultural systems? Do cultural differences involve or affect people's perception, classification process, memory or modes of problem-solving? Do they affect the course of cognitive development? This course will examine cross-cultural research in psychology and anthropology that attempts to answer these questions. Special attention will be given to the role of language, to the relation between magic and science, and the cognitive effects of literacy.
	Mr. Hunt	Mr. Murray	

<b>Anthropology 162a. Anthropology and Psychoanalysis</b>	<p>Survey of psychoanalytic theories advanced by Freud, Bettelheim, Roheim, Devereaux and others regarding the idea of the unconscious. Using the experience of psychoanalytic therapy as our frame of reference, we will deal cross-culturally with infancy, initiation rites, funerals and myths. What is the contribution of psychoanalysis to an understanding of the relationship between the individual and society?</p>	<b>Anthropology 186. Mathematics and Computers in Archaeological Data Analysis</b>	<input type="checkbox"/> Not offered 1984-1985
<b>Anthropology 165a. Modernization and Social Change</b>	<p>Exploration of selected problems and processes of modernization with reference to both the "developed" and the "underdeveloped" states and the relationships between them.</p>	<b>Anthropology 188a. Materials in Ancient Societies</b>	<p>A seminar and laboratory course meeting at MIT. In 1984-85 the subject will be biological materials in prehistory. The course will concentrate on techniques for reconstructive climate, ecology and subsistence of ancient societies. Materials to be covered include zooarchaeological remains and macro- and micro-botanical remains. Each student will be responsible for a large laboratory project.</p>
	<p>Instructors: Frederick Wiseman (MIT), Richard Meadow (Harvard) and Lawrence Kaplan (UMass-Boston).</p>		<p>Mr. Wiseman, Fall Term Ms. J. Zeitlin, Brandeis Co-ordinator</p>
<b>Anthropology 166aR. The Nature of Human Nature</b>	<p>This course will deal with various theories of human nature and the evidence for such theories. It will explore the way in which theories of the nature of man have figured in interpretations of culture. The course addresses the question: to what extent is culture the expression of nature and to what extent does it depart from nature?</p>	<b>Anthropology 188b. Materials in Ancient Societies</b>	<p>See 188a.</p>
	<p>Instructors: Messrs. Meadow and Kaplan, Spring Term</p>		<p>Ms. J. Zeitlin, Brandeis Co-ordinator</p>
<b>Anthropology 170a. Peasant Cultures: Past and Present</b>	<input type="checkbox"/> Not offered 1984-1985	<b>Anthropology 190a. Comparative Social Stratification</b>	<input type="checkbox"/> Not offered 1984-1985.
<b>Anthropology 171a. The Comparative Method</b>	<p>Relativism is the fundamental problem of social science and all cross-system investigation must confront it. Insider-outsider, emic-etic equivalence and other forms will be considered. The major solutions to the problem will be evaluated.</p>	<b>Anthropology 198a. Waltham Community Studies Seminar</b>	<p>Mr. Folsom</p>
	<p>Instructors: Mr. Folsom</p>		
<b>Anthropology 175a. Pro-Seminar in Anthropological Theory</b>	<input type="checkbox"/> Not offered 1984-1985	<b>Anthropology 198b. Waltham Community Studies Seminar</b>	<p>Mr. Folsom</p>
<b>Anthropology 175b. Pro-Seminar in Method in Cultural Anthropology</b>	<input type="checkbox"/> Not offered 1984-1985	<b>Primarily for Graduate Students</b>	
		<b>Anthropology 226-254. Readings and Research Courses</b>	
		<b>226a and b. Readings and Research in Archeology</b>	<p>Staff</p>
		<b>227a and b. Readings and Research in Linguistic Anthropology</b>	<p>Ms. Irvine</p>

Anthropology 228a and b. <b>Advanced Readings in Method and Theory</b>	Mr. Kaplan	245a and b. <b>Readings and Research in Physical Anthropology</b>	Mr. Gomberg
229a and b. <b>Guided Comparative and Historical Research</b>	Mr. Hunt	253a and b. <b>Readings and Research in Economic Anthropology</b>	Mr. Kaplan
230a and b. <b>Readings and Research on Culture of Hunters and Gatherers</b>	Mr. Jacopin	254a and b. <b>Readings and Research in Southeast Asian Ethnography</b>	Mr. Appell
231a and b. <b>Readings in Cognitive Culture</b>	Mr. Saler	Anthropology 300a and b. <b>Seminar in Anthropological Field Work</b>	□ Not offered 1984-1985.
232a and b. <b>Readings in Law</b>	Staff	Anthropology 302. <b>Summer Research Training</b>	Field work for three months during the summer under the supervision of a member of the staff.
235a and b. <b>Readings and Research in Latin American Cultures</b>	Mr. Hunt	Anthropology 302. <b>Summer Research Training</b>	Staff
236a and b. <b>Readings and Research on East and South Asia</b>	Ms. Robinson	Anthropology 304a and b. <b>Readings and Research in Anthropological Field Methods</b>	Staff
237a and b. <b>Readings and Research in African Cultures</b>	Ms. Irvine	Anthropology 304a and b. <b>Readings and Research in Anthropological Field Methods</b>	Staff
238a and b. <b>Readings and Research in Urban Anthropology</b>	Mr. Jacobson	Anthropology 305. <b>Anthropology Colloquium</b>	Staff
239a and b. <b>Readings and Research in North American Indians</b>	Staff	Anthropology 400-414. <b>Dissertation Research</b>	Independent research for the Ph.D. degree 401. Mr. Cowgill 408. Ms. Robinson 402. Mr. Jacobson 409. Mr. Saler 403. Mr. Hunt 411. Ms. J. Zeitlin 404. Mr. Gomberg 412. Mr. R. Zeitlin 405. Ms. Irvine 413. Mr. Gomberg 407. Mr. Kaplan 414. Mr. Jacopin
240a and b. <b>Readings and Research in Medical Anthropology</b>	Mr. Jacobson		
241a and b. <b>Readings and Research in New World Ethnohistory</b>	Ms. J. Zeitlin		

# Biochemistry

## Objectives

The graduate program in biochemistry leading to the degree of Doctor of Philosophy is designed to equip students with a broad understanding of the chemistry involved in biological processes and to train them to carry out independent original research. Although students will be primarily responsible for a comprehensive understanding of biochemical phenomena, they will be encouraged to acquaint themselves with the disciplines of biology and chemistry. Research and experimental projects rather than formal course training will be emphasized. The student will, however, be required to take courses in advanced biochemistry, physical biochemistry, biochemical techniques, molecular biology and biochemistry seminars, as well as one advanced course in chemistry or biology. The choice of advanced biochemistry courses and those of other scientific disciplines (i.e., organic chemistry, genetics, embryology, etc.) are subject to the student's particular interests. The choice of research programs should be in areas under investigation by the faculty; some of these fields include metabolic regulation in normal and also tumor tissues, enzymology, immunochemistry, molecular biology, molecular pharmacology, biochemical genetics, bacterial and phage genetics, physical chemistry of macromolecules, protein chemistry, plant and virus metabolism, problems in growth and differentiation, microbial metabolism, organic biochemistry, membrane transport and energy coupling mechanisms, application of NMR to biochemical problems, biochemistry of muscle, and chromosome structure.

## Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the Biochemistry Department are also required to take the Graduate Record Examination. It is strongly suggested that the applicant take one of the advanced sections (preferably chemistry or biology) of this examination. The student's undergraduate curriculum should include some fundamental courses in biology and chemistry.

## Faculty

Professor  
**Robert H. Abeles**,  
Chair:

Mechanism of enzyme action. Design of highly specific enzyme inactivators. Design of inhibitors with potential pharmacological significance. Mechanism of drug action.

Professor  
**Gerald D. Fasman**: Conformation of biological macromolecules. Chromatin structure, protein-DNA interactions. Protein models; synthesis and conformational studies of polyamino acids.

Professor  
**Thomas C. Hollocher, Jr.**: Role and mechanism of action of oxidation-reduction enzymes.

Mechanism, enzymology and pathway of nitrogen in denitrification and nitrification.

Professor  
**William P. Jencks**: Mechanisms of reactions catalyzed by enzymes, coenzymes, and by chemical catalysts. Mechanisms, catalysis and equilibria of reactions of "energy-rich" compounds of importance in biochemistry and chemistry. Mechanisms of conversion of chemical energy into osmotic and mechanical work.

Professor  
**Lawrence Levine**: Immunoochemistry. Antibodies as analytical reagents for measuring pharmacologically important molecules.

Mechanisms of arachidonic acid metabolism by cells in culture.

Professor  
**John M. Lowenstein**: Role of phospholipids in hormone action. Regulation of metabolic pathways. Regulation and function of the purine nucleotide cycle; regulation of adenosine production in heart.

Professor  
**Susan Lowey**: Structure and function of myofibrillar proteins and their relation to the muscle cell. Techniques will include physical chemistry, protein chemistry, fluorescence and electron microscopy.

Professor  
**Alfred G. Redfield**: Magnetic resonance in biopolymers. Physical biochemistry.

Professor  
**Robert F. Schleif**: Molecular genetics. Mechanism of gene regulation as studied by genetic, physiological and physical means.

Professor  
**Serge N. Timasheff**: Physical chemistry of proteins, in particular, structure in solution and self-associations; self-assembling systems; ligand-mediated interactions; macromolecular properties of biological polymers.

Professor  
**Helen Van Vunakis**: Interaction of hallucinogenic, narcotic and

carcinogenic compounds with specific antibodies and natural receptors. Nicotine metabolism and physiological effects.

Associate Professor  
**Irwin B. Levitan**: Neurobiology. Neurobiochemistry. Regulation of neuronal membrane properties.

Associate Professor  
**Christopher Miller**: Cellular physiology and biophysics. Membrane transport and mechanisms of electrical excitation.

Associate Professor  
**William T. Murakami**: Biochemistry of virus infection. Metabolism of virus-infected cells. Purification and characterization of polyoma viruses.

Associate Professor  
**Pieter Wensink**: Molecular biology. Gene expression during development of higher organisms. The physical arrangement of genes within the DNA and the chromosomes of higher organisms.

Assistant Professor  
**Michael J. Newman**: Regulation of growth and transformation of mammalian cells. Mechanisms of action of normal and transforming growth factors. Mechanism and regulation of solute transport to bacterial and mammalian cells.

Assistant Professor  
**Michael Worgington**: Molecular biology. Developmental regulation of eukaryotic gene expression. Control of mitochondrial transcription.

## Degree Requirements

### Doctor of Philosophy

#### Program of Study.

Each doctoral candidate must satisfactorily complete the following fundamental courses: advanced biochemistry, biochemical techniques, physical biochemistry and biochemical research problems, and four of the biochemistry seminars.

#### Financial Support.

Graduate students currently receive financial support for a period of four years. Support for the fifth year or beyond is arranged with the research supervisor. The initial four-year support is contingent upon teaching for a maximum of two semesters. Teaching does not require laboratory supervision.

#### Language Requirements.

There is no foreign language requirement for the Ph.D. degree.

#### Qualifying Examinations.

An oral qualifying examination must be taken generally at the beginning of the second year. In this examination, the student will be asked to defend or refute two propositions. One proposition will be assigned in an area of research outside the student's immediate area of specialization, and one will be an original proposition put forth by the student for a research problem in his or her area of interest (this is not necessarily a problem upon which he or she will carry out research).

#### Admission to Candidacy.

#### Dissertation and Defense.

In addition, the student will have an opportunity to demonstrate general knowledge of biochemistry in a series of three area examinations: physical biochemistry and macromolecules, metabolism and enzymology, and molecular biology. Students are expected to have taken three examinations by the end of the third year; two of these must be taken by the end of the second year. This general knowledge outside the student's own field of specialization must be demonstrated to the satisfaction of an advisory committee of four Department faculty members.

At this time it will be decided whether a student will continue working towards the Ph.D. degree or a Master of Arts degree.

At some time before the second semester of their third year, students will present to a committee of four members of the Department a summary of their research accomplished to date, including the most significant experimental data and detailed plans for the completion of a research project. The committee will recommend whether the research project should be continued as a partial fulfillment of the requirements for the Doctor of Philosophy degree. After completion of the research report and the three area examinations at a level satisfactory for the Ph.D. degree, the student will be admitted to candidacy.

A dissertation will be required which summarizes the results of an original investigation of an approved subject and which demonstrates the competence of the candidate in independent research. This dissertation will be defended in a Final Oral Examination.

## Courses of Instruction

<b>Biochemistry 100a. Introduction to Biochemistry</b>	<p>Chemistry, reaction and metabolism of biologically important compounds. Formation and utilization of "energy-rich" compounds. Introduction to enzyme mechanisms. An attempt will be made to interrelate and compare basic biochemical and chemical processes. Metabolic regulation.</p> <p>Prerequisite: Chemistry 25a and b.</p>	<b>Biochemistry 142aR. Neurochemistry and Cellular Neurobiology</b>	<p>This course will present the basic concepts of neurochemistry and neurobiology. Topics to be covered will include the cellular anatomy of the nervous system, intercellular communication between neurons, transmitter biochemistry, ion channels and pumps, membrane structure and function, molecular mechanisms of transduction of electrical signals, and the neurochemistry of higher functions and mental disorders.</p>																		
<b>Biochemistry 100aR. Introductory Biochemistry</b>	<p>See Biochemistry 100a.</p> <p>Mr. Hollocher</p>		<p>Mr. Levitan</p>																		
<b>Biochemistry 101a and b. Advanced Biochemistry</b>	<p>A discussion of enzyme reactions including energetics, kinetics, and reaction mechanism. Metabolism of carbohydrates, lipids, amino acids, nucleic acids, vitamins and coenzymes, hormones, and inorganic substances. Coupled enzyme reactions, such as oxidative phosphorylation, and the synthesis of macromolecules such as glycogen, protein and the nucleic acids. Regulated enzymes and regulation of metabolism.</p> <p>Prerequisite: Chemistry 25a and b, Biochemistry 100a or their equivalent.</p>	<b>Biochemistry 200. Biochemistry Techniques</b>	<p>Prerequisite: Biochemistry 101. May be taken concurrently.</p> <p>Mr. Jencks and Staff</p>																		
<b>Biochemistry 103a. Advanced Molecular Biology</b>	<p>The fundamental principles of molecular biology will be stressed with respect to nucleic acid biosynthesis, structure, and physiological involvement. In addition, a description of events dealing with control of genetic information will be outlined.</p>	<b>Biochemistry 223a. Protein-DNA Interactions</b>	<p>Mr. Fasman</p>																		
<b>Biochemistry 104b. Introduction to Physical Biochemistry</b>	<p>Discussion of physical methods; molecular interactions; solvent effects; principles of folding; structural and conformation analyses by various spectroscopic and x-ray techniques.</p>	<b>Biochemistry 231bR. Biological Membranes</b>	<p>Mr. Miller</p>																		
	<p>Messrs. Abeles, Jencks, Hollocher and Lowenstein</p>	<p>Mr. Schleif</p>	<p>Independent research for the Ph.D. degree.</p> <table> <tbody> <tr><td>401. Mr. Jencks</td><td>411. Ms. Van Vunakis</td></tr> <tr><td>402. Mr. Levine</td><td>413. Mr. Hollocher</td></tr> <tr><td>404. Mr. Timasheff</td><td>414. Mr. Murakami</td></tr> <tr><td>405. Mr. Abeles</td><td>415. Mr. Schleif</td></tr> <tr><td>406. Mr. Fasman</td><td>416. Mr. Redfield</td></tr> <tr><td>407. Mr. Lowenstein</td><td>417. Mr. Wormington</td></tr> <tr><td>408. Mr. Wensink</td><td>418. Mr. Miller</td></tr> <tr><td>409. Ms. Lowey</td><td>419. Mr. Levitan</td></tr> <tr><td></td><td>420. Mr. Newman</td></tr> </tbody> </table>	401. Mr. Jencks	411. Ms. Van Vunakis	402. Mr. Levine	413. Mr. Hollocher	404. Mr. Timasheff	414. Mr. Murakami	405. Mr. Abeles	415. Mr. Schleif	406. Mr. Fasman	416. Mr. Redfield	407. Mr. Lowenstein	417. Mr. Wormington	408. Mr. Wensink	418. Mr. Miller	409. Ms. Lowey	419. Mr. Levitan		420. Mr. Newman
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409. Ms. Lowey	419. Mr. Levitan																				
	420. Mr. Newman																				
	<p>Messrs. Timashegg and Fasman</p>	<p>Journal Club, Colloquia and Research Club</p>	<p>In addition to the formal courses announced above, all graduate students are encouraged to participate in the Department's Journal Club and colloquia. The Journal Club is an informal meeting of the students, staff and post-doctoral fellows, at which recent publications are discussed. Colloquia are general meetings of the Department in which both speakers from the Department and guest speakers will present their current investigations. Research clubs are organized by various research groups of the Department.</p>																		

# Biology

## Objectives

The graduate program in biology is designed to encourage and train students to develop their abilities to carry out independent and original research. Each student is expected to become familiar with the major areas of research currently being conducted within the department: molecular genetics and development, neurobiology, immunology, and cell and structural biology. In addition to a flexible curriculum of courses, designed for each student's specific program, entering students begin a series of laboratory rotations to acquaint themselves with current research techniques and to explore possible areas of thesis research. Students also are given opportunities to develop their confidence and ability to make oral presentations, beginning in the first year with a proseminar designed to discuss research methodology and continuing through a series of journal clubs. Each advanced student also presents an annual summary of his or her own research to the department. Research leading to a Ph.D. degree is carried out under the direction of one of the 21 members of the biology faculty. Areas of research include: molecular biology of the regulation of gene expression, especially during development; chromosome structure and chromosomal rearrangements; developmental genetics; behavior genetics and neural development; biophysics of single nerve cells; integration of neural function; immunogenetics; immune cell differentiation and development; molecular biology of the immune system; regulation of muscle contraction; molecular and cell architecture; organization of subcellular structures. A complete list of faculty research interests is available from the Department of Biology.

## Faculty

**Professor**  
**David J. DeRosier**  
 (Rosenstiel Center),  
 Chair:  
 Structural studies of  
 macromolecular com-  
 plexes. Electron  
 microscopy applied to  
 muscle contraction,  
 cell division and blood  
 coagulation.

**Professor**  
**Carolyn Cohen**  
 (Rosenstiel Center):  
 Structure and function  
 of protein assem-  
 blies in cells. X-ray  
 diffraction and elec-  
 tron microscopy applied  
 to muscle con-  
 traction, cell division  
 and blood  
 coagulation.

**Professor**  
**Herman T. Epstein:**  
 Developmental  
 changes in the brain  
 in relation to learning  
 in man and mouse.

**Professor**  
**Chandler M. Fulton:**  
 Cell differentiation  
 and selective gene  
 expression in eucary-  
 otic cells. Morpho-  
 genesis of cell shape  
 and of cell organelles,  
 especially flagella.

**Professor**  
**Martin Gibbs**  
 (Photobiology  
 Institute):  
 Photosynthesis and  
 plant physiology.

## Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology at this institution. These are: general biology, genetics, cell physiology, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects, but whose records are otherwise superior, may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

It is strongly recommended that applicants take the Graduate Record Examination.

On being admitted to the Biology Department, graduate students will report to the temporary graduate student advisor who will assist the student with formal entry into the department and later with their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroke by courses and other responsibilities, it is customary for graduate students to spend their summers doing research. In recognition of this, the Biology Department provides summer stipends for its full-time graduate students.

**Professor**  
**James E. Haber**  
 (Rosenstiel Center):  
 Genetic and molecu-  
 lar biology of yeast  
*Saccharomyces cerevi-  
 siae*. Mechanism of  
 recombination;  
 chromosomal rearrange-  
 ments; control of  
 meiosis and cell type.

**Professor**  
**Harlyn O. Halvorson**  
 (Director, Rosenstiel  
 Center):  
 Developmental  
 changes in micro-  
 organisms. Control of  
 macromolecular syn-  
 thesis during the cell  
 cycle and during  
 sporulation in  
 bacillus.

**Professor**  
**Attila O. Klein**  
 Regulation of devel-  
 opment in higher  
 plants by light. Con-  
 trol of growth, orga-  
 nelle development and  
 macromolecular syn-  
 thesis in the leaf.

**Professor**  
**Alfred Nisonoff**  
 (Rosenstiel Center):  
 Immunochemistry.  
 Genetic control of the  
 immune response.

**Professor**  
**Andrew G. Szent-Gyorgyi:**  
 Mechanism of muscle  
 contraction. Regula-  
 tion of contractile pro-  
 teins in both primitive  
 and more advanced  
 animals.

Associate Professor <b>Jeffrey C. Hall:</b> Genetic and histo- chemical mosaic anal- ysis of behavior mutants of <i>Drosophila</i> <i>melanogaster</i> .	Associate Professor <b>Kenneth C. Hayes</b> (Director, Foster Bio- medical Research Laboratory); Comparative nutri- tional pathophysiol- ogy in man and animals. Lipoprotein metabolism and ather- ogenesis, cholelithiasis.	Associate Professor <b>John E. Lisman:</b> Mechanisms of excita- tion and adaptation in photoreceptors.	Associate Professor <b>Joan L. Press</b> (Rosenthal Center): Developmental immunology and immunogenetics.	Associate Professor <b>Lawrence J. Wangh:</b> Steroid Hormone regulated biosynthetic responses of <i>Xenopus</i> liver cells.	Assistant Professor <b>Kathleen M. Karrer:</b> Molecular analysis of germ line develop- ment, genome rear- rangements in protozoa.
		Associate Professor <b>Eve E. Marder:</b> Neurotransmitter modulation of neural circuits.	Associate Professor <b>Michael Rosbash:</b> Gene organization in eukaryotes. Macromol- ecular synthesis dur- ing oogenesis.	Associate Professor <b>Kalpana P. White:</b> Developmental neurogenetics.	Assistant Professor <b>Erik Selsing:</b> Immunology.

## Degree Requirements

At least one year of teaching experience (or equivalent) is required of all degree candidates.

### Master of Arts

The goal of the Biology Department is to train students in original research on the level of the Ph.D. Only rarely do we accept candidates for a master's degree.

### Program of Study.

The program leading to the M.A. degree in Biology requires course work and a research thesis. The student's program will be set up by the Graduate Committee of the department. The candidate must complete the equivalent of one full year of graduate study at Brandeis University, normally computed at a minimum of eight half-courses of approved study which include research courses. The candidate must pass the prescribed courses and submit an acceptable thesis.

### Language requirements.

There is no foreign language requirement for the master's degree.

### Doctor of Philosophy

#### Program of Study.

All students will be expected to obtain a knowledge of the principles and techniques of the five areas represented in the department, i.e., genetics, developmental biology, neurobiology, immunology and cell biology, before taking the qualifying examination. The background a student is expected to have in these areas will be covered in courses given by the department. Entering students will be encouraged to do research rotations in at least two different laboratories. The student will be expected also to have additional background in his or her area of specialization as well as experience in seminar and research courses to be designated.

Each student will choose his or her specific field of interest and will apply for a permanent adviser to be agreed upon by the department before the end of the second year. The adviser will assist the student in planning a well-balanced program in his or her specific field of interest. In addition, the adviser will ordinarily serve as the chairman of the student's dissertation examining committee.

#### Language Requirement.

There is no foreign language requirement for the Ph.D. degree.

#### Qualifying Examination.

Ordinarily this examination is taken in the middle of the second year of study. Subsequent to the written portion of the examination, a proposition committee is formed and the student must submit and defend two propositions from two areas. The student will be examined orally on the two propositions by the three members of the proposition committee.

#### Admission to Candidacy.

To be admitted to candidacy, the student must have (a) passed the qualifying examination, (b) been accepted by a graduate adviser.

#### Dissertation and Defense.

Each student will conduct an original investigation. With the approval of the student's adviser, however, research courses may be elected at any time. After submission of the dissertation, the candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation.

Adjunct Assistant Professor  
**Judith E. Tsipis:**  
Virology.

**Courses of Instruction**

Biology 100a. <b>Photobiology of Cells and Organelles</b>	See Photobiology 100a. Messrs. Gibbs, Schiff and Staff
Biology 101a. <b>The Electron Microscope</b>	□ Not offered 1984-1985
Biology 102b. <b>Structural Biology</b>	□ Not offered 1984-1985
Biology 105b. <b>Eukaryotic Molecular Biology</b>	The structure and control of eukaryotic genes and their products. Experimental support for current views of control will be emphasized. Research papers will be discussed.  Mr. Rosbash
Biology 107a. <b>Behavioral Genetics</b>	Development and function of the nervous system, studied through genetic changes which influence behavior. Behavior mutants in organisms, ranging from those as simple as bacteria, to those as complex as mammals, are surveyed. The effects of the mutants on the physiology, the neurochemistry, the neuroanatomy, and the embryology of these organisms are analyzed with the aim of deducing the control of behavior by the genes identified with these mutants.  Mr. Hall
Biology 122a. <b>Advanced Genetics</b>	Mr. Haber
Biology 124bR. <b>Animal Virology</b>	□ Not offered 1984-1985
Biology 125a. <b>Immunology</b>	A discussion of the biological aspects of the immune response. Topics to be covered include antibody structure and function; properties and characteristics of the cells involved in cell-mediated immunity, transplantation immunity, allergy, and humoral immunity; tolerance of the cellular perception of self and non-self; generation of antibody diversity; regulatory mechanisms involved in cell interaction, including suppression and genetic control; and aspects of tumor immunity.  Mr. Nisonoff

**Biology 142aR.  
Neurobiology**

See Biochemistry 142aR.

Mr. Levitan

**Biology 177b.  
Molecular Immunology**

This course will cover studies of the immune system at the molecular levels with emphasis on work presently being done in the field. The format of the course will be student analysis and discussion of papers in the current literature.

Mr. Selsing

**Biology 200a.  
Proseminar: Behavioral Genetics**

Messrs. Haber and Wangh

**Biology 245a.  
Selected Topics in Plant Metabolism**

See Photobiology 245a.

Mr. Gibbs

See Photobiology 245b.

**Biology 245b.  
Comparative Physiology and Biochemistry of Plants**

Mr. Schiff

**Courses in Research****Biology 300a and b.  
Biological Research**

Primarily for the first year student with the purpose of introducing him or her to biological research and to the work in progress in the laboratories of a number of faculty members. In consultation with the graduate adviser, the student plans a sequence of such tenures, each comprising six weeks or more, and then carries out experimental investigations under the guidance of the faculty members involved.

Staff

**Biology 400.  
Biophysics of Microorganisms**

Mr. Epstein

**Biology 402.  
Molecular Biology of Microorganisms**

Mr. Halvorson

**Biology 403.  
Immunochemistry; Genetic Control of the Immune Response**

Mr. Nisonoff

Biology 404. <b>Developmental Neurobiology</b>	Ms. White	Biology 414. <b>Gene Organization Eukaryotes. Macromolecular Synthesis During Oogenesis</b>	Mr. Rosbash
Biology 405. <b>Cell Differentiation and Morphogenesis</b>	Mr. Fulton	Biology 415. <b>Biochemistry and Genetics of Differentiation</b>	Mr. Haber
Biology 406. <b>Neurophysiology</b>	Ms. Marder	Biology 416. <b>Molecular Analysis of Germ Line Development</b>	Ms. Karrer
Biology 407. <b>Structural Biochemistry</b>	Ms. Cohen	Biology 418. <b>Developmental Immunology</b>	Ms. Press
Biology 408. <b>Behavioral Genetics</b>	Mr. Hall	Biology 419. <b>Immunology</b>	Mr. Selsing
Biology 409. <b>Biophysics of Visual Transduction</b>	Mr. Lisman	Biology 420. <b>Nutritional Patho-physiology</b>	Mr. Hayes
Biology 410. <b>Plant Development</b>	Mr. Klein	<b>Biology Journal Clubs</b>	There will be a number of informal Journal Clubs which deal with various topics of concern to the various specialties. These will meet regularly under the auspices of the staff. Students, depending upon their individual needs, may be required to attend.
Biology 411. <b>Gene Control in Vitellogenin</b>	Mr. Wangh		
Biology 412. <b>Structural Molecular Biology</b>	Mr. DeRosier		
Biology 413. <b>General Physiology</b>	Mr. Szent-Gyorgyi		

# Institute for Photobiology of Cells and Organelles

## Objectives

The graduate program of the Institute is designed to give students an understanding of the photobiology of cells and organelles as part of the fundamental nature of living processes, and to train them to undertake original research in these areas.

The Institute rarely admits a graduate student who desires a master's degree. Such candidates may, however, be admitted at the discretion of the faculty in exceptional cases. A Master of Arts degree may be granted on completion of a designated program to be arrived at after consultation with the graduate adviser.

## Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology or biochemistry at this institution. These are: general biology, genetics, cell physiology and biochemistry, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects but whose records are otherwise superior may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

It is strongly recommended that applicants take the Graduate Record Examination.

On being admitted to the Institute, graduate students will be advised and aided in planning their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroken by courses and other responsibilities, it is customary for graduate students to spend their summers doing research.

## Faculty

Professor  
**Jerome A. Schiff**,  
Director:  
Plant biochemistry  
and physiology.  
Photo-control of  
intracellular develop-  
ment. Sulphur  
metabolism.

Professor  
**Martin Gibbs**:  
Photosynthesis and  
plant physiology.

## Degree Requirements

At least one year of teaching experience is required of all degree candidates.

## Master of Arts

### Program of Study

The program leading to the M.A. in biology focuses primarily on the research capability of the student. Specifically, the primary requirement for the degree is the completion of a thesis based on original laboratory work which is acceptable to the Institute. In general, the preparation for an original research problem will necessitate the enrollment of a student in course work. The specific number and types of courses will vary, depending on the ultimate research problem, and will be prescribed by

the Institute. The candidate must, however, complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight half-courses of approved study.

By the end of the first year, each graduate student will choose a specific field of interest and will apply to the Director of the Institute for a permanent adviser to be assigned by the Institute. This adviser will serve as the chairman of a committee which will advise the student on courses to be taken and guide him or her throughout the thesis problem.

There is no foreign language requirement for the master's degree.

Language  
Requirement.

Qualifying  
Examination.

At the discretion of the student's advisory committee, a qualifying or comprehensive examination may be required.

## Doctor of Philosophy

### Program of Study.

All students are expected to obtain a knowledge of the principles and techniques of the areas of biochemistry and physiology (with emphasis on metabolism); genetics, regulation, DNA and repair; development; photobiology and molecular structure; structure in relation to function; photochemistry, microbiology and evolution (the five proposition areas of the qualifying examination). Proficiency in those areas of chemistry and physics related to photobiology is also expected. This knowledge will be acquired during the first two years through courses, seminars, reading, research rotations, etc. in preparation for the qualifying examination.

### Language Requirements.

There is no foreign language requirement for the Ph.D. degree.

### Research Rotation.

Students may rotate to any laboratory in the Institute on acceptance by the professor involved. A student should stay long enough on each rotation to complete a piece of research and to learn the techniques involved. Research rotations will ordinarily be completed during the first year.

When the student completes his or her rotations, he or she petitions the Institute, with the consent of the professor concerned, to have a permanent adviser appointed. When the permanent adviser has been approved, this adviser will sign program cards for the student, advise him or her on courses, convene

### Qualifying Examination.

the proposition and examining committees, supervise the thesis and ultimately convene the thesis examining committee which is the final examination for the Ph.D. degree.

Ordinarily this examination should be completed before the active dissertation work is initiated. The student's adviser will appoint, with the consent of the Institute, two other faculty members to serve with him or her in the five core areas mentioned above with no more than one proposition in any one area. Each proposition should be a proposal or hypothesis subject to debate. The proper form in which the propositions are to be submitted will be designed by the Institute. The student will be examined orally on at least three of the acceptable propositions by the three members of the propositions committee plus additional faculty members as needed.

### Admission to Candidacy.

To be admitted to candidacy, the student must have (a) passed the qualifying examination, (b) shown a capacity for independent research, (c) been accepted by a graduate adviser.

### Dissertation and Defense.

Each student will conduct an original investigation. After admission to candidacy, a dissertation committee will be appointed by the Director of the Institute. It will consist of at least three staff members headed by the student's permanent adviser. This committee will guide his or her research activities toward the doctoral dissertation, and will read and evaluate the completed dissertation. The candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation

## Courses of Instruction

### Photobiology 100a.

#### Photobiology of Cells and Organelles

Basic photobiology including an introduction to the physical and chemical concepts involved, the influence of the changing solar spectrum on the course of evolution, the catalytic uses of light by living systems including photoperception (phototropism, phototaxis and the evolution of visual systems), photomorphogenesis (blue light and re-far red systems), photoinduced rhythms, and other biological responses to light, energy storage including the photosynthetic apparatus, membranes and reaction centers, photosynthetic electron transport and phosphorylation, photosynthetic carbon metabolism and photoreduction, utilization of assimilatory power in reductive reactions, the deleterious effects of light including photodynamic action, photoprotection, erythema effects, ultraviolet damage to the genetic material and its repair and the evolution of repair systems and medical applications.

Prerequisites: Cell biology or its equivalent. Permission of the instructor.

Messrs. Gibbs, Schiff and Staff

### Photobiology 245a. Selected Topics in Plant Metabolism

A discussion of those areas of physiology and biochemistry to which plants lend themselves as experimental objects. Conspicuous examples are photosynthesis, photomorphogenesis,

nitrogen fixation, and the biosynthesis of natural products such as anthocyanins, flavonoids, isoprenoids, phenols, terpenes, etc.

Prerequisite: Permission of the instructor.

Mr. Gibbs

### Photobiology 245b.

#### Comparative Physiology and Biochemistry of Plants

A continuation of Photobiology 245a.

Prerequisite: Permission of the instructor.

Mr. Schiff

### Photobiology 406.

#### Photobiology and Plant Physiology

Mr. Schiff

### Photobiology 412.

#### Photobiochemistry and Plant Metabolism

Mr. Gibbs

### Institute Journal Clubs

There will be a number of informal Journal Clubs which deal with various topics of concern to the various specialties. These will meet regularly under the auspices of the staff. Students, depending upon their individual needs, may be required to attend.

## Biophysics

### Objectives

The interdepartmental graduate program in biophysics, leading to the degree of Doctor of Philosophy, is designed to provide a broad background in the physics and chemistry of living processes and to develop the students' capacity for independent research. The program offers opportunity for study and research in biophysical chemistry, cellular physiology, molecular genetics, photobiology, psychophysics and structural biology. Applicants are expected to have strong backgrounds in physical science with undergraduate concentrations in biology, chemistry, mathematics, physics or engineering.

### Admission

The general requirements for admission to the Graduate School are given in an earlier section of this catalog. Applications should include, in addition to letters of reference, a personal statement giving reasons for choosing biophysics and indicating areas of interest. Applicants are required to take the Graduate Record Examination and are encouraged to visit Brandeis for interviews, if possible.

### Faculty Advisory Committee

Associate Professor  
**Christopher Miller**  
 (Biochemistry),  
 Chair:

Professor  
**Donald Caspar**  
 (Physics)

Professor  
**Carolyn Cohen**  
 (Biology)

Professor  
**David J. DeRosier**  
 (Biology)

Professor  
**Alfred G. Redfield**  
 (Physics and  
 Biochemistry)

The faculty of the Biophysics Program is composed of members of the Biochemistry, Biology, Chemistry and Physics departments. About twenty faculty members participate in this graduate program.

### Degree Requirements

#### Doctor of Philosophy

##### Program of Study.

Since Biophysics is very a broad field and students may have widely different backgrounds and goals, the course of study is flexible. During the first year students take Biophysics 300, a course in which students meet with selected faculty members to explore areas of research. Students are also required to successfully complete Biophysics 200b. In addition, students generally complete the following courses: Advanced Biochemistry (Biochemistry 101a), Introduction to Physical Biochemistry (Biophysics 104b), Structural Biology (Biophysics 102b) and Biophysical Optics (Biophysics 101a). Courses to complete the student's program will depend on the student's background and interests. The additional courses may be in the areas of biochemistry, biology, biophysics, chemistry, mathematics, photobiology or physics.

##### Language Requirements.

Reading knowledge of one foreign language, chosen from French, German or Russian. A knowledge of computer programming may be substituted.

##### Admission to Candidacy.

Students are admitted to candidacy on the basis of academic performance and on research proposals that they develop and defend, generally during the second year of study. Students must pass Biophysics 200b in order to qualify for admission to candidacy.

##### Dissertation and Defense.

Each doctoral candidate will submit a dissertation describing his or her research and will be required to defend it in a Final Oral Examination.

**Courses of Instruction**

**Biophysics 100a** See Photobiology 100a.  
**Photobiology of Cells and Organelles** Messrs. Gibbs, Schiff and Staff

**Biophysics 101a.**  Not offered 1984-1985.  
**The Electron Microscope** Mr. DeRosier

**Biophysics 102b.**  Not offered 1984-1985.  
**Structural Biochemistry** Ms. Cohen

**Biophysics 104b.** See Biochemistry 104b.  
**Introduction to Physical Biochemistry** Messrs. Timasheff and Fasman

**Biophysics 142aR.** See Biochemistry 142aR.  
**Neurochemistry and Cellular Neurobiology** Mr. Lisman

**Biophysics 152bR.** Physical principles in the construction of biological structures; equilibria, symmetry and control mechanisms. Analysis of the structure and assembly of viruses, membranes and cellular organelles.  
**Biological Assembly** Mr. Caspar

**Biophysics 200b.**  
**Seminar in Biophysical Research**

A required seminar for Biophysics majors which will deal with current biophysical research. Emphasis is on the understanding, critical evaluation and use of scientific literature. Students will discuss topics from the areas of biophysical chemistry, cellular physiology, molecular genetics, photobiology, and structural biology, based on the reading of significant articles. In consultation with the faculty, each student will develop a research proposition based on independent reading and will prepare a research plan in the form of a thesis proposal.

Open to graduate students in other sciences with permission of the instructor.

Staff

**Biophysics 223a.**  
**Protein-DNA Interactions**

See Biochemistry 223a.  
Mr. Fasman

**Biophysics 231bR.**  
**Biological Membranes**

See Biochemistry 231bR.  
Mr. Miller

**Biophysics 300.**  
**Introduction to Research in Biophysics**

Students carry out a project in the research laboratory of one of the faculty members. Projects and faculty are selected from the departments of biochemistry, biology, chemistry and physics and the Institute of Photobiology. At least three terms of Biophysics 300 are required.

Staff

# Chemistry

## Objectives

The graduate program in chemistry, comprising course work, seminar participation, and research, is designed to lead to a broad understanding of the subject. The graduate program leads to the M.A. and Ph.D. degrees in chemistry. The Ph.D. is offered with specializations in inorganic, organic, physical and physical-organic chemistry and in chemical-physics. (Detailed information on the interdisciplinary specialization in chemical physics is found on page 10). All students will be required to demonstrate knowledge in advanced areas of inorganic, organic and physical chemistry. The doctoral program is designed to be flexible so that individual programs of study may be devised to satisfy the particular interests and needs of each student. In each case this program will be decided by joint consultation between the student and the Departmental Committee of Graduate Studies and the thesis supervisor, when selected. The doctoral program will normally include a basic set of courses in the student's own area of interest, to be supplemented by advanced courses in chemistry and, where appropriate, in biochemistry, biology, mathematics and physics.

## Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. In addition, the undergraduate curriculum of applicants should include courses in physics and mathematics (differential and integral calculus), and courses in general and inorganic, analytical, organic and physical chemistry.

Admission to advanced courses will be based upon results of a qualifying examination in each of these areas of chemistry, which will be taken upon entrance. These examinations will determine if the student shall be required to make up deficiencies in preparation. The results of the qualifying examinations will be considered in the assignment of awards for the subsequent years of graduate study and in determining a student's eligibility to continue in a degree program.

## Faculty

**Professor Irving R. Epstein:** Chair; Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics.

**University Professor Saul C. Cohen:** Chemistry of free radicals; organic photochemistry; specificity and mechanism of reactions of enzymes.

**Professor Ernest Grunwald:** Solvation in polar liquid solutions; molecular structure of ion pairs; structure-energy relationships; concerted reaction mechanism.

**Professor James C. Hendrickson:** Synthesis of natural products; computerization of synthesis design and development of new synthetic reactions.

**Professor Peter C. Jordan:** Statistical mechanics of membrane transport; electrostatic modeling of ion pores; molecular dynamics.

**Professor Kenneth Kustin:** Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; membrane transport; fast reactions; oscillating reactions.

**Professor Henry Linschitz:** Reactions of excited molecules; electron-transfer processes; photo-ionization in solution; metal complexes; physical mechanisms of photo-biological processes.

**Professor Myron Rosenblum:** Chemistry of organometallic complexes of the transition elements; new methods in organic synthesis employing organometallic complexes.

**Professor Colin Steel:** Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions; photophysics and photochemistry of infrared laser-induced reactions

**Professor Robert Stevenson:** Isolation and structure of natural products; compounds of medicinal interest (steroids, terpenoids, lignans, heterocyclics).

**Professor Thomas R. Tuttle** Chemistry of liquid solutions; the composition and structures of species in metal solutions in polar solvents; application of spectroscopy, Jr.: e.g., magnetic resonance, optical and spectropolarimetry to elucidation of the composition and structure of solutions; theory of chemical species in solution.

**Associate Professor Iu-Yam Chan:** Optically detected magnetic resonance; laser spectroscopy.

**Associate Professor Bruce M. Foxman:** X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions.

**Associate Professor Michael J. Henechman:** The chemistry of ions in the gas phase: the effect of solvation on reactivity and mechanism.

**Associate Professor Philip M. Keehn:** Synthetic methods, organic synthesis of strained rings and theoretically interesting molecules; applications of NMR spectroscopy to organic systems; photooxidation; pure and applied laser chemistry of organic systems; host-guest complexes.

**Associate Professor Barry B. Snider:** Synthetic methods; mechanism of synthetically important reactions; total synthesis of natural products.

**Assistant Professor Alan M. Stolzenberg:** Bioinorganic chemistry; synthesis, structure, and reactivity of inorganic and organometallic complexes; homogeneous catalysis; electrochemistry and electron transfer.

**Assistant Professor Louis S. Stuhl:** Organometallic synthesis, catalysis and mechanism; novel ligands and oxidation states in organometallic complexes, and applications to organic synthesis.

## Degree Requirements

Detailed information on the interdisciplinary specialization in chemical physics is found on page

Entering students may be admitted to either the master's or the doctoral program.

All candidates for advanced degrees are required to meet the following requirements:

### Qualifying Examination.

These examinations are set twice a year, in September and January, and are based on the undergraduate chemistry curriculum. Students are required to take and are expected to pass qualifying examinations in organic, inorganic-analytical and physical chemistry during their first year.

### Language Requirements.

Each student is obliged to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.

### Seminar.

Each student in residence is required to attend and participate in the seminar in his or her chosen area of concentration throughout the period of graduate study.

### Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

### Placement and Evaluation of Progress.

Recommendations with respect to the first-year course of study will be based on the performance on the initial qualifying examinations. Admission to the graduate degree programs will be based on the student's record in course work during the first year and the performance on the qualifying examinations.

## Master of Arts

### Program of Study.

Each candidate is required to complete successfully one year of study at the graduate level in chemistry, or, with prior permission of the Departmental Graduate Studies Committee, in related fields. The program will include laboratory work and, normally, six semester courses at the graduate level. The detailed program of study will be one jointly arrived at by the candidate and the Graduate Studies Committee to reflect the candidate's area of interest as well as perspective of other areas.

### Residence Requirement.

The minimum residence requirement for the M.A. degree is one year.

## Doctor of Philosophy

### Program of Study.

A balanced program of study will be prepared by the students and the Departmental Graduate Studies Committee. In general, students will be required to take a minimum of seven graduate level courses, of which two must lie outside the student's field of research. If a student fails to pass a qualifying examination after two attempts, a graduate course has to be taken in that area of chemistry before the end of the second year. For this purpose a list of appropriate courses is available upon request. For students

entering with previous graduate experience, a maximum of five courses may be transferred for credit. It is expected that doctoral students will choose a research adviser during the first year, normally in the second semester.

A student is recommended for admission to candidacy for the doctoral degree upon certification by his or her thesis adviser and the Graduate Studies Committee that the student has satisfied the qualifying and language examination requirements and has made satisfactory progress in the program of study, research and the final Ph.D. examinations.

### Admission to Candidacy.

### Final Examinations.

The graduate student must demonstrate proficiency by taking final examinations in his or her major field: organic, physical-organic, physical, or inorganic chemistry. In the organic chemistry program, a cumulative examination procedure is used. Each year, six one-hour examinations (on unannounced topics), and one three-hour examination (on an announced reading) are given. The final examination requirement is satisfied by the student having passed a) one three-hour examination and six one-hour examinations, or b) two three-hour examinations and three one-hour examinations. In physical-organic chemistry, final examinations are administered twice a year and are based on assigned readings. Students must pass three of these examinations and must maintain satisfactory progress toward this end. In physical chemistry and inorganic chemistry, generally during the third semester of graduate work, the student is assigned a set of propositions. In physical chemistry the set consists of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two. In inorganic chemistry the student is assigned two propositions; he or she takes a written examination on one proposition, and is examined orally on his or her proposed research project and the remaining proposition.

The minimum residence requirement for the Ph.D. degree is two years.

### Residence Requirements.

### Dissertation and Defense.

A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

**Courses of Instruction**Chemistry 113b.  Not offered 1984-1985.**Advanced  
Laboratory  
Techniques: Modern  
Organic Methods****Chemistry 141a.  
Advanced Physical  
Chemistry I**

Thermodynamics and statistical thermodynamics. Properties of real systems: gases phase stability, chemical equilibrium, and solution. Statistical equilibrium, ensembles, and fluctuations.

Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry.

Mr. Steel

**Chemistry 121a.  
Inorganic Chemistry  
I, Lectures**  
Introduction to the electronic and molecular structures and kinetics and reaction mechanisms of transition-metal complexes. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry. Three lecture hours a week.

Mr. Stolzenberg

**Chemistry 141b.  
Advanced Physical  
Chemistry I**

Irreversible thermodynamics and chemical kinetics. Entropy production, reciprocal relations, microscopic reversibility and regression of fluctuations. Active transport, relaxation kinetics and oscillating reactions. Solution kinetics including enzyme reactions. Gas kinetics and theories of elementary processes. Microscopic kinetics: energy transfer and collision dynamics.

Prerequisite: Satisfactory grade in Chemistry 141a or permission of instructor.

Mr. Jordan

**Chemistry 130a.  
Advanced Organic  
Chemistry:  
Structure**  
Introduction to group theory and its application to molecular orbital theory and spectroscopy. Prerequisites: Satisfactory grade in an undergraduate course in organic chemistry.

Mr. Rosenblum

**Chemistry 142bR.  
Advanced Physical  
Chemistry II**

Quantum mechanics: waves and operatory methods. Schrodinger's equation, simple model systems, angular momenta, perturbation theory and variational principle. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry.

Mr. Epstein

**Chemistry 131a.  
Advanced Organic  
Chemistry: Topics in  
Structure and  
Reactivity**  
Stereochemistry, conformational analysis and reactive intermediates. Theory of aromaticity and electrocyclic reactions.

Mr. Rosenblum

**Chemistry 143aR.  
Advanced Physical  
Chemistry II** Not offered 1984-1985**Chemistry 132b.  
Advanced Organic  
Chemistry:  
Spectroscopy**  
Application of physical and spectroscopic methods to the elucidation of structure and stereochemistry of organic compounds. Prerequisite: Satisfactory grade in Chemistry 130a or permission of instructor.

Mr. Stevenson

**Chemistry 144a.  
Structure and  
Spectroscopy** Not offered 1984-1985.**Chemistry 133aR.  
Advanced Organic  
Chemistry:  
Mechanisms**  
Principles of the determination of reaction mechanisms. Substituent effects. Mechanisms of nucleophilic and electrophilic substitution reactions. Carbocation chemistry. Mechanisms of addition and elimination. Acidity and basicity.

Mr. Stuhl

**Chemistry 147b.  
Applications of  
Group Theoretical  
Methods to  
Problems in  
Chemistry**

Finite groups and the theory of representations. Applications in ligand field theory. Full rotation group and angular momentum. Atomic spectra: degeneracies, selection rules and evaluation of matrix elements. Molecular quantum mechanics: application of group theory in electronic, vibrational, rotational and magnetic resonance spectroscopy. Prerequisite: Satisfactory grade in undergraduate courses in organic and physical chemistry.

Mr. Tuttle

**Chemistry 134b.  
Advanced Organic  
Chemistry:  
Synthesis**  
Systematic design of organic syntheses, including a survey of reaction for construction and functionalization of organic molecules and criteria for their use in synthesis design. Selected total syntheses from the literature will be examined.

Mr. Snider

**Chemistry 150c.  
Special Topics in  
Chemistry** Not offered 1984-1985.**Biochemistry 100a.  
Introductory  
Biochemistry**

See Biochemistry 100a.

Section 1: Mr. Lowenstein

Section 2: Messrs. Abeles and Jencks

Biochemistry 100aR. <b>Introductory Biochemistry</b>	See Biochemistry 100a. Mr. Murakami and Mr. Fasman	Chemistry 241c. <b>Physical Chemistry Seminar</b>	Required of graduate students in physical chemistry, who must audit this course each year. Staff
Chemistry 200. <b>Advanced Chemistry Laboratory</b>	Staff	Chemistry 243a. <b>Statistical Thermodynamics</b>	<input type="checkbox"/> Not offered 1984-1985.
Chemistry 220c. <b>Inorganic Chemistry Seminar</b>	Required of graduate students in inorganic chemistry, who must audit this course each year. Staff	Chemistry 250c. <b>Chemical Physics Seminar</b>	Required of graduate students in chemical physics, who must audit this course each year. Staff
Chemistry 229b. <b>Special Topics in Inorganic Chemistry</b>	<input type="checkbox"/> Not offered 1984-1985.	The following courses are given every three to five years or when there is sufficient student interest:	
Chemistry 231c. <b>Organic Chemistry Seminar</b>	Required of graduate students in organic chemistry, who must audit this course each year. Staff	Chemistry 122b. <b>Inorganic Chemistry II, Lectures</b>	<input type="checkbox"/> Not offered 1984-1985.
Chemistry 232b. <b>Chemistry of Heterocyclic Compounds</b>	<input type="checkbox"/> Not offered 1984-1985.	Chemistry 123b. <b>Nuclear Chemistry</b>	<input type="checkbox"/> Not offered 1984-1985.
Chemistry 234b. <b>Chemistry of Organometallic Compounds</b>	<input type="checkbox"/> Not offered 1984-1985.	Chemistry 248a. <b>Advanced Quantum Chemistry</b>	<input type="checkbox"/> Not offered 1984-1985.
Chemistry 235a. <b>Special Topics in Organic Chemistry: Synthetic Organic Chemistry</b>	<input type="checkbox"/> Not offered 1984-1985.	<b>Chemistry Colloquium</b> Lectures by faculty and invited speakers. Required of all graduate students. Non-credit.	
Chemistry 237bR. <b>The Chemistry of Organic Natural Products</b>	<input type="checkbox"/> Not offered 1984-1985.	<b>Courses in Research</b>	
Chemistry 240c. <b>Physical-Organic Chemistry Seminar</b>	Required of graduate students in physical-organic chemistry, who must audit this course each year. Staff	Chemistry 400. <b>Organic Chemistry and Physical Organic Chemistry</b>	Reaction mechanisms; photochemistry; enzyme reactions; free radicals. Mr. Cohen
Chemistry 401. <b>Organic Chemistry</b>		Chemistry 401. <b>Organic Chemistry</b>	Chemistry of natural products; steroids, triterpenoids, bisarylpropanoids, benzofurans. Mr. Stevenson
Chemistry 403. <b>Organic Chemistry</b>		Chemistry 403. <b>Organic Chemistry</b>	Chemistry of organometallic complexes of the transition elements. New methods in organic synthesis employing organometallic complexes. Mr. Rosenblum
Chemistry 404. <b>Organic Chemistry</b>		Chemistry 404. <b>Organic Chemistry</b>	Synthesis of natural products; development of new synthetic reactions; computerization of synthesis design systematics. Mr. Hendrickson

Chemistry 406. <b>Physical Chemistry</b>	Reactions of excited molecules; luminescence; electron-transfer processes; metal complexes; physical mechanisms of photobiological processes.  Mr. Linschitz	Chemistry 417. <b>Organic Chemistry</b>	Organic synthesis of strained ring and theoretically interesting molecules; synthetic methods; application of nuclear magnetic resonance spectroscopy to organic systems; photooxidation; thermal chemistry; pure and applied laser chemistry of organic systems; enclathration and host-guest complexation in tri- <i>o</i> -thymotide.  Mr. Keehn
Chemistry 408. <b>Physical Chemistry</b>	Experimental and theoretical study of chemical species in solution. Spectroscopic investigations of metal solutions in polar solvents.  Mr. Tuttle	Chemistry 419. <b>Inorganic Chemistry</b>	X-ray structure determination; reactions in crystals; coordination polymers; kinetics, mechanisms, and crystallography of rearrangement, polymerization, and decomposition reactions in the solid-state.  Mr. Foxman
Chemistry 409. <b>Inorganic Chemistry</b>	Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; membrane transport; fast reactions; oscillating reactions.  Mr. Kustin	Chemistry 420. <b>Organometallic Chemistry</b>	Organometallic synthesis and reactivity: chemistry of transition metal cyano complexes; organometallic complexes in unusual oxidation states; catalysis of carbon-carbon bond formation and cleavage. Chemistry of phosphorin and its metal complexes.  Mr. Stuhl
Chemistry 411. <b>Physical Chemistry</b>	Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions. Photophysics and photochemistry of infrared laser-induced reactions.  Mr. Steel	Chemistry 421. <b>Organic Chemistry</b>	Synthetic methodology and natural product synthesis: Lewis acid induced carbon-carbon bond forming reactions of alkenes and their application to natural product synthesis; intramolecular reactions; ene and Prins reactions; synthesis of biologically active natural products.  Mr. Snider
Chemistry 412. <b>Physical and Physical Organic Chemistry</b>	Infrared laser chemistry; molecular absorption from IR laser sources; molecular electronic spectra and conformational studies at high temperatures; solvation in polar liquid solutions; molecular structure of ion pairs.  Mr. Grunwald	Chemistry 422. <b>Inorganic Chemistry</b>	Synthesis, structure and reactivity of inorganic and organometallic complexes. Bioinorganic chemistry.  Mr. Stolzenberg
Chemistry 413. <b>Physical Chemistry</b>	Membrane transport; electrostatic modeling of ion pores; molecular dynamics of ionic motion in biological molecules.  Mr. Jordan		
Chemistry 414. <b>Physical Chemistry</b>	Kinetic studies of the reactions and properties of ions and solvated ions in the gas phase.  Mr. Henchman		
Chemistry 415. <b>Physical Chemistry</b>	Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics.  Mr. Epstein		
Chemistry 416. <b>Physical Chemistry</b>	Optically detected ENDOR investigation of organic triplet state molecules. Interaction between an electronically excited molecule and lattice phonon. Supersonic jet spectroscopy on large molecules.  Mr. Chan		

<b>Ph.D. in Chemistry with Specialization in Chemical Physics</b>	<p>The graduate program in chemical physics is an interdisciplinary specialization designed to meet the needs of students who wish to prepare themselves for the study of scientific problems using the methods and theories of modern physics and physical chemistry. This objective is attained by (1) formal course work in chemistry, physics, and, possibly, mathematics; (2) participation in relevant graduate seminars; (3) a program of supervised research involving chemical physics; (4) independent study.</p> <p>The program is designed to be flexible in providing individual programs of study to satisfy the particular interests and needs of each student. Final programs of study and research will be jointly arrived at by the student, his or her research supervisor and the Chemical Physics Committee. Only candidates for the Ph.D. will be accepted.</p>	<b>Doctor of Philosophy</b> Program of Study.
<b>Admission</b>	<p>The general requirements for admission to the Graduate School apply to candidates for admission to the graduate program in chemical physics. Applicants should have a strong undergraduate background in chemistry, physics and mathematics.</p>	Admission to Candidacy.
<b>Degree Requirements</b>	<p>No master's degree is offered with specialization in chemical physics, but students who satisfy the appropriate requirements will be eligible for the M.A. degree in chemistry.</p> <p>All candidates for the Ph.D. degree in Chemistry with specialization in chemical physics must meet the following requirements:</p>	Final Examinations.
<b>Qualifying Examinations.</b>	<p>Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry, physics and mathematics by the performance in three qualifying examinations: one organic or inorganic/analytical chemistry and one each in physical chemistry/physics/-mathematics. These examinations are set twice a year, in September and January. Results of these examinations will be used as an aid in constructing the student's initial program of course work and will be considered by the Chemical Physics Committee in evaluating the student's progress.</p>	Residence Requirements. Dissertation and Defense.
<b>Language Requirements.</b>	<p>Each student is required to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.</p>	The minimum residence requirement for the Ph.D. degree is two years.
<b>Seminar.</b>	<p>Each student in residence is required to attend and to participate in the Chemical Physics Seminar. Participation in other seminars in physics and chemistry is also recommended.</p>	A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.
<b>Teaching.</b>	<p>It is expected that all graduate students will do some undergraduate teaching during the course of their studies.</p>	It is expected that some candidates for the Ph.D. degree in chemistry with specialization in chemical physics may require a longer period of time in course work than will students in either of the fields of physics or chemistry. In general, the program for the Ph.D. in chemistry with specialization in chemical physics will include eight semester graduate courses: four in physical chemistry, one in either organic or inorganic chemistry and three in physics. No specific course work in mathematics is required, but students are expected to be familiar with the techniques necessary for the proper pursuit of their research. In addition, each student is expected to demonstrate a knowledge of elementary computer programming.

# Classical and Oriental Studies

## Oriental Studies Program

### Objectives

The program of studies aims at preparing the student for teaching and research in the history, languages and archaeology of the ancient civilizations of the Nile valley, western Asia and the Aegean.

The program has a twofold purpose: first, to train students who wish to specialize in these areas of study; second, to offer an opportunity to students in other fields to integrate with their own studies the courses given in the Department.

### Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program.

Students planning to enter this Department should take as much Hebrew, Greek and Latin as possible during their undergraduate study. They should also make every effort to achieve a sight reading knowledge of French and German before embarking on graduate study.

### Faculty

Associate Professor  
**Patricia A. Johnston**  
Chair:  
Greek and Latin  
language and  
literature.

Professor  
**Douglas J. Stewart:**  
Greek language and  
philosophy.

Professor  
**Louis V. Zabkar,**  
Director of Graduate  
Studies:  
Egyptian language,  
history and  
archaeology.

Associate Professor  
**Leonard C.**  
**Mueller:**  
Greek language and  
literature.

Associate Professor  
**Ian Todd:**  
Aegean and Near  
Eastern archaeology.

Assistant Professor  
**Martha A. Morrison:**  
Cuneiform studies.  
Mesopotamian  
history, language.

Assistant Professor  
**Susan Scheinberg:**  
Greek and Latin  
language and  
literature.

Assistant Professor  
**Cheryl L. Walker:**  
Classical history.

Adjunct Assistant  
Professor  
**Jean D'Amato:**  
Latin language and  
literature

### Degree Requirements

#### Master of Arts Program of Study.

Each candidate for the master's degree is required to complete satisfactorily not less than eight semester-courses in the department, plus any additional course work that the major professor may prescribe. While an exceptionally well-prepared student may fulfill the requirements for the degree in one year, two years of study will normally be required. Master's examinations will not be administered before the end of the second year of residence except by special permission of the department. All students, whatever their principal area of specialization, will be required to study in all three major areas covered by the department, namely, language, history, and archaeology.

#### Language Requirement.

The candidate must demonstrate a reading proficiency in French or German, and competence in at least one ancient language. Certain areas of specialization will require the knowledge of additional languages.

#### Qualifying Examinations.

The student must demonstrate, in written and oral examinations, proficiency in two major areas of the program.

#### Doctor of Philosophy Program of Study.

The requirements are the same as for the Master of Arts degree, plus eight additional semester-courses in the department.

#### Language Requirement.

The candidate must demonstrate a reading knowledge of two modern foreign languages, ordinarily French and German, and competence in at least one ancient language. Certain areas of specialization will require the knowledge of additional languages.

#### Qualifying Examinations.

The student must demonstrate, in written and oral examinations, proficiency in two major areas of the program. A thorough competence must be demonstrated in the field of concentration as well as proficiency in another area of the program elected by the student.

#### Admission to Candidacy.

A student shall be eligible for admission to candidacy upon completing the language requirements and satisfactorily passing the written and oral qualifying examinations.

#### Dissertation and Defense.

The dissertation must be a significant and original contribution to scholarship demonstrating a capacity for independent research based on primary sources. The completed dissertation shall be read and found acceptable by its director and two other readers, one of whom must be a member of another department or from another academic institution. The candidate must defend the dissertation successfully in a Final Oral Examination.

## Courses of Instruction

### Classics

**Greek 115bR.** **Aeschylus** Close reading and discussion of **Seven Against Thebes**.

Mr. Stewart

**Greek 116a.** **Aristophanes**  Not offered 1984-1985

**Greek 116b.** **Pindar**  Not offered 1984-1985.

**Greek 118aR.** **Euripides** Reading and discussion of **Medea**.

Ms. Walker

**Greek 118b.** **Sophocles**  Not offered 1984-1985

**Greek 120aR.** **Plato: A Literary Study**  Not offered 1984-1985.

**Latin 116a.** **Latin Prose Authors**  Not offered 1984-1985

**Latin 116b.** **Satura**  Not offered 1984-1985.

**Latin 118aR.** **Latin Lyric and Elegiac Poetry**  Not offered 1984-1985

**Latin 118b.** **Roman Historians** Ms. Johnson

**Latin 120aR.** **Roman Epic Poets:** **Vergil** Vergil's artistic and philosophic achievement will be examined, beginning with his earlier works, the *Elegiques* and *Georgics*, and concluding with a close reading of the *Aeneid*.

Ms. Scheinberg

### Archaeology

**CLORS 100a.** **The Archaeology of the Aegean and the Near East I** A survey of the archaeological remains of the region from the earliest Neolithic (ca. 10,000 B.C.) to the end of the Late Bronze Age (ca. 1,000 B.C.). Included will be the origins of agriculture, the rise of civilization and the emergence of the first cities in the Near East. Interconnections between the various cultural spheres will also be discussed. The ancient monuments and civilizations of Mesopotamia, Egypt, Syria-Palestine, Anatolia, Cyprus and the Aegean will be considered. The course is designed for the student who wishes an introduction to the field, and no previous experience in archaeology is required.

Mr. Todd

### CLORS 100b. Archaeology of the Aegean and Near East II

Selected archaeological topics will be chosen dealing with the ancient monuments and civilizations of Mesopotamia, Egypt, Syria-Palestine, Anatolia, Cyprus and the Aegean. The scope of the course ranges from an early Neolithic town in Turkey (ca. 6,000 B.C.) with its wall paintings and other forms of architectural decoration, to the widespread international trade in the Mediterranean in the Late Bronze Age (ca. 1,500-1,000 B.C.). Other topics include the pyramids of Egypt, the religious architecture of ancient Mesopotamia, and the instructor's recent excavations of prehistoric sites on Cyprus.

Mr. Todd

### CLORS 111. The Archaeology of Syria-Palestine

Not offered 1984-1985.

### CLORS 116a. The Archaeology of Cyprus I

An introduction to the archaeology of the island of Cyprus from the earliest Neolithic settlement through the Iron Age. Emphasis will be laid on the important results of the instructor's own recent excavations at various prehistoric Cypriot sites. The relationship of the island to other countries of the Aegean and Near East will be considered in depth, emphasizing the pivotal geographical position of the island and how this is reflected in the Cypriot archaeological world. The earlier periods (Neolithic-Early Bronze Age) will be considered in the first semester, and the later periods (Middle Bronze Age-Iron Age) in the second semester.

Mr. Todd

### CLORS 116b. The Archaeology of Cyprus II

See CLORS 116a.

Mr. Todd

### CLORS 117. The Archaeology of Mesopotamia and Iran

Not offered 1984-1985.

### CLORS 120b. Archaeological Methods

See Anthropology 109b.

Mr. Zeitlin

### CLORS 121aR. Directions and Issues in Archaeology

See Anthropology 123aR.

Mr. Cowgill

### CLORS 122. The Archaeology of Anatolia

Not offered 1984-1985.

### CLORS 131. Mathematics and Computers in Archaeological Data Analysis

Not offered 1984-1985.

CLORS 146a. <b>Environment and Archaeology</b>	<input type="checkbox"/> Not offered 1984-1985.	CLORS 129b. <b>Alexandria: The City and the Idea</b>	<input type="checkbox"/> Not offered 1984-1985.
<b>History</b>			
CLORS 101a. <b>Survey of Greek History from the Bronze Age to 404 B.C.</b>	<input type="checkbox"/> Not offered 1984-1985.	CLORS 136bR. <b>Greek and Latin Elements in Scientific Nomenclature</b>	The principles of coining scientific terms, both historical and practical. Mr. Stewart
CLORS 101b. <b>Survey of Greek History from 404 B.C. to 146 B.C.</b>	<input type="checkbox"/> Not offered 1984-1985.	CLORS 145bR. <b>From Alexander the Great to Cleopatra VII: Egypt under the Ptolemies</b>	<input type="checkbox"/> Not offered 1984-1985.
CLORS 102a. <b>Roman History to 27 B.C.: A Survey</b>	The political and social history of Republican Rome, from primary and secondary sources (in English). Readings will be from Livy, Polybius, Plutarch, Sallust, Cicero, Caesar and the Roman poets and playwrights.  Ms. Walker	CLORS 147bR. <b>The Rise of Civilization in Mesoamerica</b>	See Anthropology 147bR. Mr. Zabkar
CLORS 102b. <b>Topics in Roman History: From Republic to Empire</b>	Will analyze the first centuries B.C. and A.D., the period of transition from oligarchy to Empire. All readings (in English) from such primary sources as Caesar, Plutarch, Suetonius, Sallust, Tacitus, Cicero, Pliny and Catullus.  Mr. Stewart	CLORS 148aR. <b>Rise, Function and Fall of Early Civilization: Concepts and Explanations</b>	See Anthropology 148aR. Mr. Cowgill
CLORS 103aR. <b>Islam: Civilization and Institutions</b>	See NEJS 104aR.  Messrs. Ivry and Levy	CLORS 150bR. <b>History of Egyptian Civilization</b>	Political and cultural history of Ancient Egypt from the Early Dynastic times to the end of the New Kingdom, with special emphasis on art, architecture and literature.  Mr. Zabkar
CLORS 103b. <b>The Ancient Art of Poetry</b>	Examination of how classical antiquity viewed the craft of poetry. Topics to be considered: poetic inspiration, the canons of ancient literary criticism, the moral and political functions of poetry, genre, and the interplay of tradition and originality. Texts will include Aristotle's <i>Poetics</i> , Aristophanes' <i>Frogs</i> , Plato's <i>Republic</i> (selections), Horace's <i>Ars Poetica</i> , Longinus' <i>On the Sublime</i> , and other related works.  Ms. Scheinberg	CLORS 160a. <b>Ancient Egyptian Religion</b>	<input type="checkbox"/> Not offered 1984-1985.
CLORS 106b. <b>Greek Mythology</b>	See Anthropology 108b.  Messrs. Jacopin and Muellner	CLORS 165aR. <b>Introduction to the History and Civilization of the Near East in the Pre-Islamic Period</b>	Survey of the history and civilization of the Near East with a focus on Mesopotamia from earliest times to the beginning of Islam.  Ms. Morrison
CLORS 109b. <b>Imperial Roman History: A Survey</b>	The political and social history of Rome under the Emperors, 27 B.C.-395 A.D. Readings from Ovid, Seneca, Tacitus, Suetonius, Pliny the Younger, Petronius, Lucian, Augustine, Graves' <i>I Claudius</i> and other primary and secondary readings. All readings in English.  Ms. Walker	CLORS 165b. <b>History of Mesopotamia in the 2nd and 1st Millennia B.C.</b>	<input type="checkbox"/> Not offered 1984-1985.
CLORS 110b. <b>The World Through Greek Eyes</b>	<input type="checkbox"/> Not offered 1984-1985	CLORS 166a. <b>Topics in Mesopotamian History: Second Millennium B.C.</b>	The Late Bronze Age (ca. 1500-1200 B.C.) was a brilliant period of international cultural exchange in the East Mediterranean, and was long remembered as a formative era of antiquity. Against the backdrop of political and economic history, the literature and artistic works of the time will be studied. The view of this period in later traditions such as Homer and the Bible will be examined.  Ms. Morrison

CLORS 188a. <b>Materials in Ancient Society</b>	See Anthropology 188a. Ms. J. Zeitlin, Brandeis Co-ordinator	Arabic 103b. <b>Advanced Literary Arabic</b>	See NEJS 103b. Mr. Levy
CLORS 188b. <b>Materials in Ancient Society</b>	See Anthropology 188b. Ms. J. Zeitlin, Brandeis Co-ordinator	Coptic 101. <b>Coptic Language</b>	<input type="checkbox"/> Not offered 1984-1985.
<b>Languages</b>			
CLORS 108b. <b>Comparative Grammar of Semitic Languages</b>	<input type="checkbox"/> Not offered 1984-1985.	Egyptian 101b. <b>Elementary Egyptian</b>	A study of Middle Egyptian based on Gardiner's grammar. The principal texts to be read are those included in Blackman's <i>Middle Egyptian Stories</i> and de Buck's <i>Readingbook</i> . In the second term some Middle Egyptian hieratic is read.
			Mr. Zabkar
Akkadian 101a. <b>Elementary Akkadian I</b>	Intensive study of Akkadian grammar. Readings in the Code of Hammurabi and other Old Babylonian materials. Ms. Morrison	Egyptian 102. <b>Advanced Egyptian I: Selected Texts of the Ptolemaic Period</b>	<input type="checkbox"/> Not offered 1984-1985.
Akkadian 101b. <b>Elementary Akkadian II</b>	A continuation of Akkadian 101a. Ms. Morrison	Egyptian 103. <b>Advanced Egyptian: Theban Inscriptions of the XVIIIth Dynasty</b>	Prerequisite: Egyptian 101. Mr. Zabkar
Akkadian 102. <b>Advanced Akkadian I</b>	<input type="checkbox"/> Not offered 1984-1985.	Egyptian 107a. <b>Advanced Egyptian: Readings in Egyptian Texts II</b>	<input type="checkbox"/> Not offered 1984-1985
Akkadian 103a. <b>Advanced Akkadian III: Second Millennium Texts</b>	<input type="checkbox"/> Not offered 1984-1985.	Hittite 101. <b>Elementary Hittite</b>	<input type="checkbox"/> Not offered 1984-1985.
Arabic 101. <b>Introductory Literary Arabic</b>	See NEJS 101. To be announced	Sumerian 201b. <b>Sumerian Historical Inscriptions</b>	<input type="checkbox"/> Not offered 1984-1984.
Arabic 102a. <b>Intermediate Literary Arabic</b>	See NEJS 102a. Mr. Levy	Ugaritic 101.	See NEJS 106. Mr. Young
Arabic 102b. <b>Intermediate Literary Arabic</b>	See NEJS 102b. Mr. Krek	CLORS 301-309. <b>Directed Readings</b>	301. Mr. Zabkar 302. Mr. Todd 303. Ms. Morrison 304. Mr. Stewart 305. Mr. Muellner 306. Ms. Johnston 307. Ms. Walker 308. Ms. Scheinberg 309. Ms. D'Amato
Arabic 103a. <b>Advanced Literary Arabic</b>	See NEJS 103a. Mr. Krek	CLORS 401-408. <b>Dissertation Research</b>	401. Mr. Zabkar 402. Mr. Todd 403. Ms. Morrison 404. Mr. Stewart 405. Mr. Muellner 406. Ms. Johnston 407. Ms. Walker 408. Ms. Scheinberg

## Cognitive Science

see Psychology

## Comparative History

### Objectives

The graduate program in comparative European history leads to the degree of Doctor of Philosophy. It trains students to approach the past from a comparative perspective. This method represents the most fruitful way to interpret the past, and the program fosters it in two ways. First, students will develop expertise in two broad fields of history — either medieval and early modern or early modern and modern. Second, they will study their fields from a thematic approach which transcends national boundaries and moves away from conventional periodization.

The comparative history program gives students a broad understanding of the development of Europe and fosters the ability to make cross-cultural comparisons. The thematic approach is central to the process. The Brandeis history faculty is exceptionally diverse in its interests and offers the student a variety of approaches to the past: the study of political structure, economics, the family, social organization, psychohistory, culture and thought. Each student will read widely on two of these subjects and in the process learn what developments were unique and which ones were comparable over time and space. Finally, students will take a non-European field drawn from the Americas, the Near East or the Far East.

The program is designed to prepare students for the competitive academic environment of the next decade. It trains them in methods of historical research and equips them to teach a broad range of subjects. On a deeper level, comparative history fosters intellectual flexibility and interdisciplinary skills which can be creatively employed both inside and outside academia.

A small, select student body will work in close cooperation with the faculty. Most instruction will take place in seminars specifically designed for graduate students or in individual conferences with faculty advisers. From the beginning, the curriculum will help students prepare for their qualifying examinations and guide them toward eventual dissertation research.

During the first year, students must prepare a major research paper on a topic chosen in consultation with a principal adviser. The paper may be comparative in research (involving two or more symmetrical case studies), or it may focus upon a single case (with that research informed by a reading of secondary literature on similar cases). The paper constitutes the major intellectual enterprise of the first year, and students allot half their time to it in the

first semester. First-year students also enroll in two introductory graduate colloquia, which cover the early modern and modern periods. During both of their first two years of residence, students must also enroll in the comparative history seminar, which treats significant problems in comparative perspective and introduces students to the methods and issues in comparative history. Students must also enroll in the historiography colloquium (offered alternate years). Finally, before they may take the qualifying examination all students must complete a tutorial or other work focusing on a part of the world geographically or chronologically removed from their principal area of specialization with a view to gaining a comparative perspective on their major research interest.

Students are expected to have a general mastery of two broad fields of history, either medieval and early modern or early modern and modern history. Specifically, they must demonstrate a mastery of two thematic fields within their general fields. These thematic fields will normally be chosen from such approaches as cultural, diplomatic, economic, family, intellectual, political and social history. With the approval of the faculty, a student may substitute a methodological field, such as psychohistory, anthropological history or quantitative history for half of one conventional theme. Students may also petition to substitute the medieval period for a portion of the early modern period.

Students should normally plan to complete all work for the doctorate, including the dissertation, within four to five years after entering the program; prolongation of study past the sixth year is discouraged.

### Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply to candidates for admission to this program. Students with a sound preparation in history and who have demonstrated unusual imagination and critical insight will receive special consideration. Undergraduate majors in the other social sciences or in allied fields such as comparative literature may, however, apply. Applicants should submit a sample of written work, preferably in European history. Only doctoral candidates will be accepted into the regular program. Unusually well-qualified students with distinguished records who wish to obtain a master's degree in modern history before going on to further training in such fields as law, business, diplomacy, social work, journalism or medicine, or who have already earned degrees in these fields, may also be admitted.

## Faculty

Associate Professor  
**William E. Kapelle**  
Chair:  
Medieval history.

University Professor  
**Frank E. Manuel:**  
Modern European  
intellectual history.

Professor  
**Rudolph Binion:**  
Modern history. Cul-  
ture and thought.  
Psychohistory.

Professor  
**Eugene C. Black:**  
Modern history. Polit-  
ical and social  
institutions.

Professor  
**John P. Demos:**  
Early modern history.  
Social institutions.

Professor  
**David H. Fischer:**  
Modern history. Social  
institutions.

Associate Professor  
**Gregory Freeze:**  
Russia. Social history.

Professor  
**Morton Keller:**  
Legal and political  
institutions.

Professor  
**Marvin Meyers:**  
Ideas and politics.

Professor  
**Stephen A. Schucker:**  
Modern diplomatic,  
economic, political  
and business history.

Associate Professor  
**Bernard Wasserstein:**  
Modern European,  
Jewish and Near East-  
ern history.

Assistant Professor  
**Samuel Cohn:**  
Renaissance and early  
modern history.

Assistant Professor  
**Alice Kelikian:**  
Modern history. Social  
institutional history.

Assistant Professor  
**Alexander Keyssar:**  
Labor and working-  
class history.

Assistant Professor  
**Hillel J. Kieval:**  
Modern European,  
social and institutional  
Jewish history.

Assistant Professor  
**James Kloppenburg:**  
Intellectual and cultur-  
al history.

Assistant Professor  
**Robert Schneider:**  
Early modern history.

## Degree Requirements

### Master of Arts

An M.A. degree in History will be awarded to those students who have satisfactorily completed one year of residence as a full time student, fulfilled the language requirement and passed a special examination at the master's level. Students who have completed the Ph.D. qualifying examinations and the stated requirements for the master's degree automatically qualify for conferral of the master's degree.

### Language Requirement.

The use of foreign languages is an essential tool for the comparative historian. Each student will be expected to pass, upon admission, one language examination testing the ability to read historical prose with a dictionary. The second language examination must be passed before the student registers for the third semester. All students must show competence in either French or German; for the second language another major tongue relevant to the student's research interests may be substituted.

### Doctor of Philosophy

#### Program of Study.

During the first year in the program, students will complete a major research paper and the two colloquia in European history. Within the first two years, they must also take a proseminar in early modern Europe, a historiography course and two seminars in comparative history, besides fulfilling the geographical outside-field requirement.

At the beginning of the third year, students will make an oral presentation setting their proposed dissertation topic in comparative perspective; this is called the "category examination." The student will, when feasible, spend the third or fourth year in the program abroad pursuing research for the dissertation. Arrangements can be made for conferences with foreign scholars who can advise on the subject of research.

### Qualifying Examination.

Normally the student will take the qualifying examination at the end of the second year of study. Any student who has failed to complete the qualifying examination by the sixth semester will be dropped from the program.

### Admission to Candidacy.

A student may be admitted to candidacy for the Ph.D. degree when he or she has completed course and residence requirements, demonstrated proficiency in the required foreign languages, passed the qualifying examination and gained approval of his or her dissertation topic by the faculty of the program.

### Dissertation and Defense.

The student will normally define a dissertation topic in the term preceding the qualifying examination but in no case later than the end of the fifth semester in the program. When the student's dissertation committee accepts the completed dissertation, the candidate must defend it at a final oral examination.

Courses of Instruction		Comparative History 321 — 339a and b. Readings	321a and b. Mr. Binion	330a and b. Mr. Schucker
Seminars			322a and b. Mr. Black	332a and b. Mr. Wasserstein
History 190aR. <b>Historiography</b>	□ Not offered 1984-1985.		323a and b. Mr. Demos	333a and b. Mr. Cohn
History 200a. <b>Colloquium in European Comparative History Since the 18th Century</b>	Comparative examination of major historical issues in Europe from the eighteenth through the twentieth centuries.		324a and b. Mr. Fischer	334a and b. Mr. Kapelle
Comparative History 201b. <b>Colloquium in Early Modern Comparative History</b>	Mr. Schucker		325a and b. Mr. Freeze	335a and b. Ms. Kelikian
Comparative History 202bR. <b>Seminar in Comparative History: Town and Country</b>	Introduction to the methods of Comparative History through a consideration of the problems of Town and Country in various historical contexts. Although designed primarily for graduate students this course is also open, with consent of the instructor, to qualified juniors and seniors with a substantial background in history or related fields.	Mr. Black	326a and b. Mr. Keller	336a and b. Mr. Keyssar
Comparative History 203b. <b>Seminar in Comparative History: Death in History</b>	□ Not offered 1984-1985.		327a and b. Mr. Manuel	337a and b. Mr. Kieval
Comparative History 301 — 319a and b. <b>Research Papers</b>			328a and b. Mr. Meyers	338a and b. Mr. Kloppenburg
			329a and b. Mr. Schrecker	339a and b. Mr. Schneider
Comparative History 401-419. <b>Dissertation Research</b>			401. Mr. Binion 402. Mr. Black 403. Mr. Demos 404. Mr. Fischer 405. Mr. Freeze 406. Mr. Keller 407. Mr. Manuel 408. Mr. Meyers 409. Mr. Schrecker	410. Mr. Schucker 412. Mr. Wasserstein 413. Mr. Cohn 414. Mr. Kapelle 415. Ms. Kelikian 416. Mr. Keyssar 417. Mr. Kieval 418. Mr. Kloppenburg 419. Mr. Schneider
Comparative History 500. <b>Registration in Time</b>				
In addition the following courses may be taken as equivalent to Comparative History seminars.				
History 110a. <b>The Civilization of the Early Middle Ages</b>	□ Not offered 1984-1985.			
History 110bR. <b>The Civilization of the High and Late Middle Ages</b>	Mr. Kapelle			
History 112b. <b>The Crusades and the Expansion of Medieval Europe</b>	□ Not offered 1984-1985.			
History 113a. <b>English Medieval History</b>	Mr. Kapelle			

History 123a. <b>The Renaissance</b>	<input type="checkbox"/> Not offered 1984-1985.	History 134a. <b>19th Century</b> <b>Europe: From Revolution to National Unification</b>	<input type="checkbox"/> Not offered 1984-1985.
History 123b. <b>The Reformation</b>	Mr. Schneider		
History 124a. <b>Topics in English Constitutional and Legal History</b>	<input type="checkbox"/> Not offered 1984-1985	History 134b. <b>19th Century</b> <b>Europe: Nationalism, Imperialism, Socialism (1870-1914)</b>	<input type="checkbox"/> Not offered 1984-1985.
History 124bR. <b>Social and Cultural Transformations: The Renaissance and the Reformation</b>	Mr. Cohn	History 135a. <b>The Jews of Central and East-Central Europe, 1740-1939</b>	<input type="checkbox"/> Not offered 1984-1985.
History 125a. <b>The General Crisis of the 17th Century in Europe</b>	Mr. Schneider	History 136a. <b>The Rise of Modern Germany, 1648-1848</b>	<input type="checkbox"/> Not offered 1984-1985.
History 126bR. <b>Tudor-Stuart England</b>	<input type="checkbox"/> Not offered 1984-1985.	History 136b. <b>Germany, 1849-1949</b>	<input type="checkbox"/> Not offered 1984-1985.
History 127b. <b>L'Ancien Régime: State and Society in Pre-Revolutionary France</b>	<input type="checkbox"/> Not offered 1984-1985.	History 137a. <b>Evolution of International System, 1815-1945</b>	Mr. Schuker
History 130a. <b>The French Revolution</b>	Mr. Black	History 137b. <b>The World of Kafka, Freud and Einstein</b>	Mr. Kieval
History 131b. <b>Topics in Modern Social History: Industrialization and Social Change in Europe</b>	<input type="checkbox"/> Not offered 1984-1985	History 138aR. <b>Economy and Society in Europe, 1750-1900</b>	Ms. Kelikian
History 132a. <b>Modern European Thought and Culture: Marlowe to Mill</b>	<input type="checkbox"/> Not offered 1984-1985	History 138b. <b>Economy and Society in Europe, 1900 to the Present</b>	<input type="checkbox"/> Not offered 1984-1985.
History 132b. <b>European Thought and Culture Since Darwin</b>	<input type="checkbox"/> Not offered 1984-1985		
History 133a. <b>The Enlightenment</b>	Mr. Manuel		
History 133b. <b>Topics in 19th and 20th Century Intellectual History</b>	<input type="checkbox"/> Not offered 1984-1985.		

History 139b. <b>Fascism East and West</b>	<input type="checkbox"/> Not offered 1984-1985.	History 183bR. <b>The Great Powers of the Middle East</b>	<input type="checkbox"/> Not offered 1984-1985.
History 141b. <b>Studies in British History — 1830 to the Present</b>	<input type="checkbox"/> Not offered 1984-1985.	History 184a. <b>Arabs and Jews in Palestine, 1881-1948</b>	<input type="checkbox"/> Not offered 1984-1985.
History 142bR. <b>Twentieth Century Europe</b>	<input type="checkbox"/> Not offered 1984-1985.	History 186aR. <b>The Second World War</b>	<input type="checkbox"/> Not offered 1984-1985.
History 145b. <b>Nation, Church and State in Eastern Europe</b>	Mr. Kieval	History 186b. <b>The Vietnam War</b>	Mr. Schuker
History 146bR. <b>Topics in German History: Hitler, Germany and Europe</b>	<input type="checkbox"/> Not offered 1984-1985.	History 191a. <b>History and Psychology</b>	<input type="checkbox"/> Not offered 1984-1985.
History 147a. <b>Rise of Imperial Russia</b>	Ms. Herlihy	History 194b. <b>Politics and Diplomacy in Europe, 1914-1945</b>	Mr. Schuker
History 147b. <b>Russia Since 1861</b>	Mr. Freeze	History 198b. <b>Science and Technology in the Twentieth Century</b>	Mr. Schuker
History 180aR. <b>Modern China</b>	<input type="checkbox"/> Not offered 1984-1985.		
History 181bR. <b>Seminar on Chinese Thought</b>	Mr. Schrecker		

## Comparative Literature

See Joint Program of Literary Studies

## Cross-Registration at Boston College, Boston University and Tufts University

A full-time graduate student at Brandeis University may enroll in one graduate course at Boston College, Boston University or Tufts University. Brochures suggesting courses for cross-registration at each of the host institutions are available at the graduate school office of each institution.

A student who wishes to enroll in a course at one of these institutions should consult with the instructor in the particular course and should expect to satisfy the prerequisites and requirements normally required

for admission to the course, including adherence to the academic calendar of that course.

A student at Brandeis University who wishes to enroll in a graduate course at one of the host institutions should obtain a registration permit from the Graduate School Registrar and should present this permit to the Graduate School Registrar of the host institution.

## Economics

Although the University does not offer graduate study in Economics, it does offer a significant group of upper-level courses which may be of interest to graduate students in other departments. These courses receive graduate credit on permission of the student's adviser.

### Courses of Instruction

Economics 22aR. <b>American Economic History</b>	A study of the major institutions and factors which have influenced American economic growth. Selected topics and issues will be analyzed.  Mr. Evans	Economics 46bR <b>World Trade and Development</b>  A study of the role of trade and finance in economic development. Attention will be given to the effects of capital movements of oil price increases and wealth changes, of changes in the world monetary regime and the performance of major world financial institutions. The adaptation of these changes by specific countries will be the subject of individual research papers. There will be an opportunity for the presentation of student papers.  Mr. Weckstein
Economics 37a. <b>The Political Economy of Cities</b>	This course will consist of a formal analysis of the structure of metropolitan areas and an exploration of the set of economic and social problems that have beset city life.  Mr. Filer	Economics 60a. <b>International Economic Policy</b>  Introduction to international economic analysis through policy issues. Specific policy problems, such as the protectionist response triggered by the extraordinary growth of U.S. auto imports over the past fifteen years, provide a laboratory for examining and testing theories in two main branches in international economics: trade and protection, and finance and foreign exchange.  Mr. Coiner
Economics 38b. <b>Economic Policy Issues</b>	Six topics will be studied with the objective of applying tools of economic analyses to the understanding of important United States problems and to the development of responsible policy positions. The topics are 1) minority development, 2) the control of inflation, 3) energy dependence, 4) reviving productivity gains, 5) immigration, 6) the burden of the aged. There will be class presentations and discussions of alternative analyses and policies.  Mr. Weckstein	Economics 61b. <b>The Political Economy of International Trade</b>  A study of the interactions of economic forces and political institutions in the conduct of international trade. The course will examine the domestic political economy of protectionism as well as mechanisms of international policy coordination. Sectoral case studies will be used to test theories and models from both economics and politics.  Messrs. Petri and Keohane
		Economics 68b. <b>The History of Economics</b>  The development of economic analysis from the Physiocrats to the 20th century. Readings in the works of the economists themselves rather than secondary texts.  Mr. Weckstein

<b>Economics 74bR. Law and Economics</b>	A study of economic foundations of American law in selected areas of interest. Topics will include: the role of property rights and liability rules in the control of externalities; controlling the cost of accidents; the control of criminal behavior; product failure and damage; medical malpractice. The effects of judgments and status will be studied. <i>Prerequisite:</i> ECON 2a.	<b>Economics 83a. Statistics for Economic Analysis</b>	A first course in statistical inference. Topics include descriptive statistics, probability, normal and binomial distributions, joint distributions, sampling distributions, point and interval estimation, properties of estimators, testing of hypotheses, simple and multiple regression, analysis of variance. <i>Prerequisite:</i> ECON 2a.
Mr. Weckstein	Section 1: Mr. Dolbear Section 2: Mr. Williams		
<b>Economics 75aR. The Economics of Underdeveloped Countries</b>	The economic circumstances of poor countries and their special problems: misfit technologies, income inequality, urban unemployment, and the terms of their participation in the World Economy. Their policy option and the roles for rich countries are studied.	<b>Economics 83aR. Statistics for Economic Analysis</b>	Section 1: To be announced Section 2: Mr. Williams
<b>Economics 76b. Trade Unions, Collective Bargaining and Public Policy</b>	Study of institutional aspects of labor economics in the United States. Attention will be paid to the history and development of trade unions, the process of collective bargaining, the effect of unions on wages and other conditions of employment and legal environment governing labor relations. Public sector labor issues will also be discussed.	<b>Economics 84b. Econometrics</b>	An introduction to the construction and testing of econometric models. Both single and multiple equation models will be studied. <i>Prerequisite:</i> ECON 80a, 82b, 83a.
Mr. Jefferson	Mr. Lewbel		
<b>Economics 80a. Microeconomic Theory</b>	Analysis of the behavior of economic units within a market economy. Emphasis upon individuals' decisions as demanders of goods and suppliers of resources and firms' decisions as suppliers of goods and demanders of resources under various market structures. Related topics such as welfare and efficiency, market failure, and general equilibrium.	<b>Economics 123a. Economic History of Europe</b>	An account of economic developments in (mainly Western) Europe since the Industrial Revolution. The requirements will consist of short papers and an examination. The form is mainly lectures.
Mr. Filer	Mr. Kindleberger		
<b>Economics 80aR. Microeconomic Theory</b>	Section 1: To be announced Section 2: Mr. Schwalberg	<b>Economics 135aR. Industrial Organization</b>	Economic analysis of American industry in terms of market structure, conduct and performance. Topics included are business organization, concentration, barriers to entry, price and product policies, profits, efficiency and productiveness. <i>Prerequisite:</i> ECON 80a.
Section 1: To be announced Section 2: Mr. Schwalberg	Mr. Lurie		
<b>Economics 80aR. Microeconomic Theory</b>	Section 1: To be announced Section 2: Mr. Lurie	<b>Economics 136bR. Managerial Economics</b>	An application of the skills of the economists to problems of modern managers in business, the public sector and non-profit private institutions.
Mr. Lurie	Mr. Lewbel		
<b>Economics 82b. Macroeconomic Theory</b>	The meaning of the national income concepts; the factors determining the level of national income, employment and prices; the influence of fiscal and monetary policies; theory of economic growth. <i>Prerequisite:</i> ECON 8b.	<b>Economics 159bR. The Economics of Education</b>	Economic analysis of education as a form of investment in human capital. Major topics include the evaluation of educational programs, the financing of higher education, some economics of primary and secondary education, and the impact of education upon economic growth and the distribution of income.
Mr. Dolbear	Mr. Schwalberg		
<b>Economics 82bR. Microeconomic Theory</b>	Mr. Jefferson		
<b>Economics 160a. International Trade and Finance</b>	Analysis of the causes and effects of international trade. The interaction of international trade and growth. The spread of multinational enterprises. Introduction to foreign exchange markets and the balance of payments. Eurodollars. The problem of achieving internal and external macroeconomic balance. History of the monetary system since World War II.	Mr. Petri	

<b>Economics 161aR. Multinational Corporation</b>	The economic theory of direct foreign investment is developed and applied in the analysis of the history of the multinational corporation. The problem raised by these compromises are examined and various solutions considered. The policies of both home countries and host countries are analyzed and evaluated.	<b>Economics 171b. Financial Markets</b>	This course will investigate markets, primarily stock, bond, and commodity exchanges, both in the U.S. and abroad, as institutions in their own right. Specific topics will include the reasons some markets are centralized exchanges and others informal dealer networks; the methods of enforcing contracts; transfers of title and negotiability; the operation of clearing houses; the various types of auctions; speculators and floor traders; market makers and specialists; the brokerage industry.
	Mr. Kindleberger		Mr. Williams
<b>Economics 163b. International Finance and Macroeconomics</b>	Mr. Jefferson	<b>Economics 172b. Money and Banking</b>	The theory and practice of financial intermediation, with special reference to the behavior of commercial banks and other financial institutions. Emphasis is on analysis of the general economic role of intermediaries and the effect of risk on their operations. The techniques these firms use to cope with risk, such as loan pooling and diversification, are studied in detail. The effects of recent changes in government regulation (i.e., relaxation of Regulation Q, creation of money market funds, etc.) upon bank behavior are studied.
<b>Economics 171a. Financial Markets</b>	This course will cover a selection of topics at the frontier of theoretical work in finance. Topics will include the evaluation and selection of assets, the behavior of investors under risk; portfolio composition; theories of the equilibrium prices of assets, such as the Capital Asset Pricing Model and the Arbitrage Pricing Model; prices of options; the controversies over the levels of dividends and debt; and the efficient market hypothesis.		Mr. Lurie
	Mr. Williams	<b>Economics 182a. Advanced Macroeconomics</b>	This course extends the analysis of macroeconomic issues introduced in ECON 82b. Special topics include: inflation, unemployment, supply-side economics, expectations, growth, monetarism, deficit spending, long-run properties of short-run models, and the microeconomics of macro models.
			Mr. Dolbear

## English and American Literature

<b>Objective</b>	<p>The graduate program in English and American Literature is designed to offer training in the interpretation and evaluation of literary texts with some attention to related scholarly disciplines, particularly history and linguistics. It also offers candidates who have some ability in writing an opportunity to pursue this interest as a normal part of the graduate program.</p>	<b>Admission</b>	<p>Candidates for admission should have a bachelor's degree, preferably with a major in English and American literature, and a reading knowledge of French, Italian, German, Greek, or Latin. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.</p>		
<b>Faculty</b>					
<p><b>Professor</b>  <b>Michael T. Gilmore:</b>  Chair:  Puritanism. Literature of the American Revolution. American renaissance.</p>	<p><b>Professor</b>  <b>Robert O. Preyer:</b>  Nineteenth century literature. Social and intellectual history.</p>	<p>Visiting Fannie Hurst  <b>Professor</b>  <b>Frank Conroy:</b>  Fiction.</p>	<p>Associate Professor  <b>Karen W. Klein:</b>  Medieval literature. Women's studies.</p>	<p>Assistant Professor  <b>John Burt:</b>  American literature</p>	<p>Assistant Professor  <b>Helena Michie:</b>  Nineteenth century literature and feminist criticism.</p>
<p><b>Professor</b>  <b>Philip Fisher:</b>  Nineteenth century literature. Critical theory.</p>	<p><b>Professor</b>  <b>John H. Smith:</b>  Shakespeare, Renaissance drama. Neo-Latin literature.</p>	<p>Visiting Professor  <b>Susan R. Horton:</b>  Nineteenth century literature.</p>	<p>Associate Professor  <b>Alan Levitan:</b>  Shakespeare. Music and drama.</p>	<p>Assistant Professor  <b>Judith Ferster:</b>  Medieval literature.</p>	<p>Writer-in-Residence  <b>Frank Bidart:</b>  Poetry</p>
<p><b>Professor</b>  <b>Eugene Goodheart:</b>  Criticism, 19th and 20th century literature and thought.</p>	<p><b>Professor</b>  <b>Susan Staves,</b>  Director of Graduate Studies: Restoration and eighteenth century literature.</p>	<p>Visiting Fannie Hurst  <b>Professor</b>  <b>Christopher Ricks:</b>  Seventeenth and twentieth century literature</p>	<p>Associate Professor  <b>Richard J. Onorato:</b>  Romantic literature. Modern literature.</p>	<p>Assistant Professor  <b>Geoffrey G. Harpham</b>  (on the Mellon Foundation): Contemporary fiction.</p>	<p>Writer-in-Residence  <b>Geoffrey Wolff:</b>  Fiction.</p>
<p><b>Professor</b>  <b>Allen Grossman:</b>  Poetry and poetic structures. Seventeenth century literature. Modern and contemporary literature.</p>	<p><b>Professor</b>  <b>Peter Swiggart:</b>  American literature. Criticism theory.</p>	<p>Visiting Fannie Hurst  <b>Professor</b>  <b>Thomas Sleigh:</b>  Poetry.</p>	<p>Assistant Professor  <b>Anne Janowitz:</b>  Romantic and modern poetry.</p>	<p>Assistant Professor  <b>James B. Merod:</b>  Twentieth century poetry.</p>	<p>Visiting Lecturer with rank of Assistant Professor  <b>Martha Strom:</b>  Contemporary American Literature.</p>

## Degree Requirements

Following are the degree requirements for the Department of English and American Literature. Students should also consult the General Degree Requirements and Academic Regulations found in an earlier section of this catalog.

### Master of Arts

Program of Study.	Each student will take English 200a. In addition, a normal program will consist of five courses, at least three of which will be 200-level seminars. Students must also register for English 295b (Major Text Examination).	Dissertation Field Examination.	A student who comes to Brandeis with a B.A. is required to take 12 courses for the Ph.D.; a student who comes with an M.A. is normally required to take 8 courses at Brandeis.
Residence Requirement.	The minimum residence requirement is one year, though students with inadequate preparation may require more.	Residence Requirement.	All candidates for the Ph.D. will be asked to pass an oral examination in the historical period or genre in which the candidate expects to write a dissertation. This examination is taken in the third year. The examination may be taken as many times as necessary without prejudice to a student's standing in the Ph.D. program.
Language Requirements.	A reading knowledge of a major foreign language (modern European, ancient Greek, Biblical Hebrew or Latin). The completion of the language requirements at another university does not exempt the student from the Brandeis requirement.	Language Requirement.	The minimum residence requirement is one year beyond the master's degree or two years beyond the bachelor's.
Qualifying Examination.	An oral examination, by committees of faculty members, will be given at the beginning of the spring term on one of several major texts, the texts to be announced at the end of the fall term. This examination will test a student's ability to read and understand a major literary work or a group of short works by the same author. Admission to the Ph.D. program in addition to qualification for the M.A. degree will depend upon the results of this examination, in addition to course evaluation.	Other Requirements	

### Doctor of Philosophy

Admission to the Ph.D. Program.	(1) Students who complete, with distinction, the M.A. requirements at Brandeis University are admitted to the Ph.D. program by the Department upon recommendation of the Committee on Graduate Studies.  (2) Students who enter with a master's degree or a full year of graduate work in English from another university are required to fulfill the qualifying examination requirement described above under the Master of Arts Program. Provided this requirement is fulfilled, such students may, at the Department's discretion, be admitted to the Ph.D. program after successful completion of a semester at Brandeis and upon recommendation by the Committee on Graduate Studies. At the time of admission up to a year's residence and course credit for work completed elsewhere may be granted.	Admission to Candidacy.	A student will be recommended by the Department for admission to candidacy for the Ph.D. degree after completing with distinction the program of study and satisfying all departmental requirements prior to the writing and defense of a dissertation. A student admitted to candidacy must have submitted a formal dissertation proposal, subject to approval by the student's dissertation director and by an additional member of the departmental faculty.
Program of Study.	Second year students continue to take courses, usually two a semester. Students have an obligation to review their preparation in the field with their advisers and to ensure that they are acquiring both a comprehensive knowledge of the various historical periods and genres of English and American literature and a more profound knowledge of the particular period or field they propose to offer as a specialty. With the exception of English 200, no specific courses are required of all Brandeis Ph.D. candidates; each student's program will be designed in the light of the strengths and weaknesses of his or her previous preparation and in accord with his or her own interests.	Dissertation and Defense.	Each student will submit a dissertation in a form approved by his or her dissertation director and by a committee appointed by the Director of Graduate Studies. The student will defend the dissertation at a final oral examination. The dissertation may be a monograph, a series of closely related essays, a bibliographical project or a textual project.
		History and Structure of English.	The Department also offers an alternative program in the history and structure of the English language, with specialization in Old, Middle, or Early Modern English. For details, address the chairman of the Department.

## Courses of Instruction

English 122aR.  
**Old English**

An introduction to the language and literature of Anglo-Saxon. Readings will include the major extant short poems, including *The Wanderer*, *The Seafarer*, and *The Dream and the Rood*, and selections from the epic poem *Beowulf*.

Ms. Klein

English 126a.  
**American Realism  
and Naturalism  
1865-1900**

The principal concern of this course will be how some of the central American Realists and Naturalists set about representing and analyzing American social and political life. Topics of discussion will include: the changing status of individuals, classes, and genders; the relations between the individual and the natural and social determinants of personal destiny; ideas concerning the nature and texture of personal experience. Authors will include: James, Twain, Howells, Crane, Wharton, Dreiser, Chopin, Frederic, Norris, Sinclair.

Mr. Burt

English 127bR.  
**Contemporary and  
Avant-Garde Fiction**

Since Joyce, fiction has been inspired by attempts to "explore the limits of narrative," to "push the novel to its extremes," to "deconstruct the self," or other such projects. This course will study the ways in which contemporary fiction seeks to advance while still retaining certain traditional elements of character, suspense and story that make reading a pleasurable as well as a challenging experience. We will be reading works by Doctorow, Roth, Gabriel Garcia Marquez, Milan Kundera, Italo Calvino, Barth, Murdoch and others.

Mr. Harpham

English 130a.  
**American Literature**

Not offered 1984-1985

English 130bR.  
**Cosmic Poetry:  
Vergil, Milton, Yeats**

A course in the works of poets who construct an account of the world as an ordered whole (a *cosmo*). Common to these three poets is the intention of founding a new religious, national, and psychological basis for the life of the human community. Inherent in the work of these poets is to be found the total inventory of requirements for the construction of a whole human world. What are these requirements, and what is the nature of the evil entailed by the structures of world and mind necessary to supply them?

Mr. Grossman

English 131b.  
**Feminist Theory**

Feminism is accused of having no basis in theory. While some feminists see the enabling possibilities of transcending traditional notions of "discipline," others are in the process of defining from feminism a theoretical territory on the margins of patriarchal culture. This course looks at the contributions of various theories to the feminist project, and examines, in turn, what feminism can suggest to Marxists, Freudians, deconstructionists, and others. We will be using both "primary" and "secondary" sources including works by Rich, Gallop, Spivak, Gilbert and Gubar, and Daly.

Ms. Michie

English 132bR.  
**Chaucer**

An introduction to middle English and a study of some works of Chaucer, including *The Parliament of the Fowls* and *The Canterbury Tales*. We will emphasize Chaucer's ideas and the various poetic forms and narrative techniques he used to develop them.

Ms. Ferster

English 133a.  
**Advanced  
Shakespeare**

An intensive analysis of a small number of Shakespeare's plays.

Mr. Smith

English 134aR.  
**The Women  
of Letters in the  
Eighteenth Century**

Not offered 1984-1985

English 135a.  
**Wordsworth to  
Stevens: The  
Continuity of  
Romantic Poetry**

Not offered 1984-1985

English 135bR.  
**Romanticism**

Major poetic texts by Blake, Wordsworth, Coleridge, Keats, Shelley and Byron, with some attention to their prose, and to Dorothy Wordsworth's *Journals* and Mary Shelley's *Frankenstein*. Our purpose is both to define the common ground of the Romantics' poetic, political and philosophic goals, and to determine the singularity of each writer's achievement. Topics we will address include: Romantic genres, the "Romantic Woman," Romantic Medievalism and Orientalism, and the relationships between the "visionary" and the "visual."

English 136a.  
**Whitman and his  
Archive**

Not offered 1984-1985

English 137a.  
**Twentieth Century  
Poets: T.S. Eliot and  
Modern British  
Poetry**

T.S. Eliot. Others (Yeats, Empson, Hill) will get a look-in, in the light of Eliot.

Mr. Ricks

English 137bR. <b>Samuel Beckett</b>	This course will be devoted mainly, though not exclusively, to Beckett's non-dramatic works. We will examine the relations of his writing to his being the great writer of an age which has dilated longevity till it is as much of a nightmare as a blessing; an age which now finds one of its most urgent anxieties to be the definition of death. What kind of life should there be in the art of someone who believes that it is better to be dead than alive, better still never to have been born?	English 147b. <b>Modern British and American Drama</b>	Dramatists to be read include Shaw, O'Neil, Williams, Stoppard and Pinter.
	Mr. Ricks	Mr. Swiggart	
English 138b. <b>Poetry and Religion</b>	A course in the poetry of religion and the religion of poetry. Primary texts include medieval English lyric poems of the 14th and 15th centuries, extensive consideration of Donne, Herbert and the "minor" poems of Milton, selected poems of Pope and Blake, Keats, Whitman, Hopkins, Crane, Yeats and Eliot. Some reference will be made to Bible (Psalms, Second Isaiah, the Gospels), liturgy, particularly the canon of the Mass and continental examples of religious poetry.	English 151b. <b>Contemporary Critical Theories: The Politics of Criticism</b>	A course in reading and writing analytic prose. We will begin by looking at Thoreau's <i>Walden</i> as a representational structure and as a strategy of rhetorical entanglements designed to challenge readers by disrupting their habits of dealing with texts. That will allow us to deal the ways strong writing "educes" its audience and promotes competing interpretations. Our overall concern is to understand how reading asserts influence and what critical writing can (and cannot) accomplish.
	Mr. Grossman	Mr. Merod	
English 140b. <b>Wordsworth and Yeats</b>	<input type="checkbox"/> Not offered 1984-1985	English 153b. <b>Milton</b>	<input type="checkbox"/> Not offered 1984-1984.
English 143a. <b>Elizabethan and Jacobean Drama</b>	<input type="checkbox"/> Not offered 1984-1985	English 155b. <b>Lawrence and the Moral Tradition</b>	<input type="checkbox"/> Not offered 1984-1985
English 143b. <b>English Drama before Shakespeare</b>	<input type="checkbox"/> Not offered 1984-1985	English 157aR. <b>The Post-Modern Generation</b>	A course in how certain poets responded to the heritage of the great generation of modernists who preceded them. The poets studied will be Robert Lowell, Allen Ginsberg, Elizabeth Bishop, Sylvia Plath.
English 145b. <b>Victorian Poetry and Poetics</b>	<input type="checkbox"/> Not offered 1984-1985	Mr. Bidart	
English 146b. <b>Mark Twain and His America</b>	<input type="checkbox"/> Not offered 1984-1985	English 158a. <b>American Poetry: Pound, Eliot, and Stevens</b>	<input type="checkbox"/> Not offered 1984-1985
English 147a. <b>Faulkner, Fitzgerald and Bellow</b>	<input type="checkbox"/> Not offered 1984-1985	English 161a. <b>Theory of the Fantastic</b>	<input type="checkbox"/> Not offered 1984-1985
		English 163a. <b>Renaissance Poetry</b>	<input type="checkbox"/> Not offered 1984-1985
		English 163b. <b>English Renaissance Tragedy</b>	<input type="checkbox"/> Not offered 1984-1985
		English 164bR. <b>Restoration Drama</b>	Comedy, heroic drama and tragedy between 1160 and 1800. The course will devote some attention to the history of the plays in performance. Authors to be studied include Dryden, Etheredge, Wycherly, Otway, Congreve, Vanbrugh, Lillo, Garrick, Goldsmith and Sheridan.
		Ms. Staves	

English 165a. <b>Social Novel in the Nineteenth Century: Self and Society in the English Novel</b>	A study of the social "Thought" of major novelists as it reveals itself in characterization, narrative strategy and narrative voice. The class will be conducted as a discussion in which students will be expected to make periodic presentations. The reading list may change from year to year. Among the novelists we will read are Jane Austen, Emily Bronte, George Eliot, Thomas Hardy and D.H. Lawrence.	English 180a. <b>The Modern American Short Story</b>	Although this course will have occasional reference to Kafka, Chekov, Frank O'Connor and Pinter, its focus is the American story, most particularly in its 20th century evolutions. We will read Hawthorne, Melville and James to prepare for our study of Fitzgerald, Hemingway, Faulkner, Anderson, Flannery O'Connor, Cheever, Roth, Malamud, Gass, Barth, Elkin, Beattie, Carver, Jayne Ann Phillips, Hannah, Yates, Updike and others. The development of a genre will be investigated by close attention to matters of craft: narrative design, point of view, voice, exclusion, time and transition, inference, syntax. Two critical papers will be required together with a final examination.
Mr. Goodheart		Mr. Wolff	
English 167a. <b>Self-Critical Fictions</b>	<input type="checkbox"/> Not offered 1984-1985	English 185aR. <b>Dickens and Dostoevsky</b>	<input type="checkbox"/> Not offered 1984-1985
English 167bR. <b>Contemporary Poetry: Poets and Poetry: Theory and Practice</b>	<input type="checkbox"/> Not offered 1984-1985	English 187a. <b>The Modern Novel I</b>	<input type="checkbox"/> Not offered 1984-1985
English 17+b. <b>Eighteenth Century Novel</b>	Early developments in English fiction with some attention to theories of narrative and problems in the practical criticism of the novel. Emphasis on Defoe, Richardson, Fielding, Sterne and Austen.	Mr. Staves	<b>Seminars</b>
Ms. Staves		English 200a. <b>Methods of Literary Study: Shakespeare</b>	Traditional methods of literary study, including research into literary history and criticism, finding of manuscripts and rare books, and editing. This year students will not solve again problems which have already been solved, but will work collectively to do original work on a neglected eighteenth-century woman writer, probably Elizabeth Griffith. The argument will be advanced that valid work in literary theory and criticism still depends on the adequacy and accuracy of such traditional scholarship. The group will attempt to publish a number of short notes and articles resulting from its work. <b>Required of all first-year students</b> , open to others.
English 175b. <b>City and Psyche in Victorian Literature</b>	An examination of the shock of urban living on early inhabitants of industrialized society. The course will cover rural and small-town experience, life in London and, finally, sea adventures and English contact with the "third world". Writers include Mrs. Gaskell, Dickens, Cissing, Hardy, Trollope, Eliot, Conrad, Stevenson, Kipling.	Mr. Preyer	Ms. Staves
Mr. Preyer		English 216a. <b>Joyce and the Artist Hero</b>	A close study of <i>Dubliners</i> , <i>Portrait of the Artist as a Young Man</i> , and <i>Ulysses</i> .
English 176a. <b>Hawthorne and Melville</b>	<input type="checkbox"/> Not offered 1984-1985	Mr. Goodheart	
English 177a. <b>American Gothic and American Romance</b>	<input type="checkbox"/> Not offered 1984-1985	English 223b. <b>Renaissance Drama</b>	Two or three tragedians, for example: Marlow, Chapman, Webster.
English 177bR. <b>Contemporary Women Writers</b>	In this course we will explore the trend toward the fantastic in contemporary women writers as an outgrowth of the literature of alienation and complaint as it appears in Emily Dickinson, Kate Chopin and Virginia Woolf, Doris Lessing, Adrienne Rich, Piercy, Redmon and Morrison, among others, attempt to repair this sense of homelessness by making new worlds to accommodate modes of seeing and feeling which forced those earlier writers into exile from the "reality" of the man-made world. We will evaluate strategies for social change as pressures affecting the evolution of women's writing, but our main focus will be on the new literary forms forged in this quest for inhabitable worlds.	Ms. Strom	Mr. Smith

English 239b. <b>Writing About Literature</b>	This is a course in varieties of literary interpretation. The course will concentrate on Hawthorne's <i>The Scarlet Letter</i> but is not a course in <i>The Scarlet Letter</i> . Rather it will explore Hawthorne's novel from a number of critical perspectives: historical, psychoanalytic, reader-response, feminist, deconstructionist.	English 295b. <b>Studies in a Major Text</b>	Required of all first year students. Ms. Staves
	Ms. Horton	English 352-369a and b. <b>Directed Research</b>	352a and b. Mr. Goodheart 352a and b. Mr. Preyer 355a and b. Mr. Smith 356a and b. Mr. Swiggart 357a and b. Mr. Grossman 358a and b. Mr. Gilmore 359a and b. Ms. Klein 360a and b. Mr. Levitan
English 240b. <b>Speculative Poetics</b>	What shall we say about poems and the structures that characterize them? This is a course in the description of poems and the discovery of their human use. The subject of study will be individual poems in context of the historical situation in which they arise and to which, in the first instance, they make reference. Conventional subjects of poetic study such as prosody, theory of meaning, value, and reading, will be constructed in the context of the course as they come to be needed and seem to be true. The goal of the course is to discover what differences it makes what poets say. This course is intended to serve (in addition) as an introduction to the teaching of poetry.		361a and b. Mr. Onorato 362a and b. Ms. Staves 364a and b. Ms. Ferster 365a and b. Mr. Fisher 367b. Mr. Wolff 368a and b. Mr. Burt 369a and b. Mr. Merod
	Mr. Grossman	English 402-417. <b>Dissertation Research</b>	410. Mr. Levitan 411. Mr. Onorato 412. Mr. Staves 414. Ms. Ferster 415. Mr. Fisher 416. Mr. Merod 417. Mr. Burt
English 246a. <b>American Romantic Fiction: Precursors and Classics</b>	This course will examine the origins and flowering of romanticism in the American novel. Authors to be considered will include: Charles Brockden Brown, Washington Irving, James Fenimore Cooper, Nathaniel Hawthorne, Herman Melville.	402. Mr. Goodheart 404. Mr. Preyer 405. Mr. Smith 406. Mr. Swiggart 407. Mr. Grossman 408. Mr. Gilmore 409. Ms. Klein	402. Mr. Goodheart 404. Mr. Preyer 405. Mr. Smith 406. Mr. Swiggart 407. Mr. Grossman 408. Mr. Gilmore 409. Ms. Klein
	Mr. Gilmore		

## French

See Joint Program of Literary Studies

## German

See Joint Program of Literary Studies

## History

See Comparative History

## History of American Civilization

### Objectives

The graduate program in the History of American Civilization, leading to the degree of Doctor of Philosophy in History, has been designed primarily to educate professional scholars and teachers of American history. The curriculum emphasizes both a comprehensive understanding of American history and the mastery of historical research and writing. For a comparative view of the American experience, students will undertake selective studies in modern European, Asian, Latin American or African history. A related field of study will be defined, according to individual background and interest, in one of the following ways:

1. Training in one of the disciplines of the social sciences or humanities — politics, international relations, or literature, for example — to provide perspectives and methods that can illuminate historical problems.
2. A thematic field in American history, involving a distinctive subject matter and discipline: for example, American social history, American legal and constitutional history, American intellectual history, or American art and architecture.
3. A topic in comparative history, involving a distinctive subject matter and discipline: 20th century British and American literature, for example, or 19th century emigration/immigration, or 18th century American and European political and social philosophy.

A small, select student body works closely with the faculty in independent reading and research courses. From the beginning, individual programs are developed to prepare stu-

dents for their qualifying examinations and to guide them toward their dissertation research. Normally, the first year's work is concentrated in American history, including substantial experience in directed research and a critical approach to problems of historiography. Second-year students, while pursuing further directed research, chiefly are encouraged to choose courses to complete their preparation in the examination fields. Studies in related fields are arranged individually with appropriate members of the University's graduate faculty, either through standard courses or directed readings. For selected students with appropriate qualifications, there are opportunities for advanced study and research with distinguished scholars at neighboring universities in such fields as legal history and business history. Applicants should note with care the four parts of the examination, specified under **Degree Requirements**, in which all students are expected to demonstrate proficiency.

### Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply to candidates for admission to this program. An undergraduate major in history is the preferred preparation for admission, and the student's undergraduate curriculum should include some fundamental courses in American history and related fields in the social sciences or humanities. Students with the M.A. in history, or a professional degree in law or other related fields, are especially invited to apply. Students interested in Crown Fellowships or in the special arrangements for study in professional fields at neighboring universities, noted above, should submit applications by February 15.

### Faculty

Executive Committee and Staff

Professor **Marvin Meyers**, Chair: Ideas and politics. Jacksonian America.

Professor **John P. Demos**: Family and community. Colonial America.

Professor **David H. Fischer**: Social and political structure. Early Republic.

Professor **Morton Keller**: Legal and political institutions. Modern America.

Professor **Donald Worster**: Modern history. Environmental history.

Associate Professor **Gerald S. Bernstein**: American art and architecture.

Assistant Professor **Alexander Keyssar**: Labor and working-class. Modern America.

Assistant Professor **James T. Kloppenberg**: Modern intellectual history.

## Degree Requirements

### Master of Arts

No one will be accepted in the program who is not a doctoral candidate. Applications from persons seeking a terminal M.A. degree are not welcome. However, the M.A. degree in History may be awarded to those who (1) have successfully completed one full year of residence at Brandeis University (eight half-courses), including two 200-level research courses, and (2) have passed the foreign language requirement.

### Doctor of Philosophy

#### Program of Study.

Doctoral candidates must complete two years in residence at Brandeis, and a minimum of sixteen half-courses. Programs of study and concentration will be formulated for each student, subject to the approval of the Executive Committee. Students will be required to maintain an average of B- or better in order to continue in the program. Continuance of fellowship support requires an average of A- or better. Incoming students normally will be expected to take one full course of Directed Research in American History in their first year of residence. The Committee may, at its discretion, grant a student transfer credit of up to one year toward the Ph.D. residence requirement for relevant graduate or professional work done elsewhere. Application for such credit shall be considered only after a student has completed one semester's residence in a full-time program. The second 200-level Directed Research course may be waived by the committee on the basis of a master's thesis or comparable research project at the graduate or professional level done elsewhere.

#### Language Requirement.

A high level of reading proficiency in one foreign language is required of all students. Students are expected to pass the language examination during the first year of residence. A student who has not passed the foreign language examination by the end of the first year is not eligible for financial aid from the University for the second year. The completion of language requirements at another university does not exempt the candidate from the Brandeis requirement.

#### Quantitative Methods.

All students in the program are urged, but not required, to attend the summer training in quantitative methods at the Newberry Library, Chicago, Illinois. In the past years, limited funds have been made available to defray expenses of students who choose to participate in the program.

#### Qualifying Examination.

Each doctoral candidate must pass at the doctoral level a qualifying examination in the following four fields: (1) general American history, one examiner will be in early American history and the other in modern American history; (2) a period of specialization in American history; (3) an area of comparative modern European, Asian, Latin American or African history; (4) a related field of study, involving one of the disciplines in the social sciences or the humanities. (Note the three alternative approaches for the fourth field specified under Objectives.) The period of specialization will

normally be selected from the following: 1607-1763, 1763-1815, 1815-1877, 1877-1914, 1914-present. The special period may be redefined on request, for good academic reasons. All proposed fields must be submitted in writing and approved by the Executive Committee. Students entering the program without previous graduate training in American history are expected to take the Qualifying Examination no later than the end of their fifth semester of residence and must pass the examination by the end of the sixth semester. Students who have earned an M.A. in history elsewhere, or who have one year of transfer credit for work taken elsewhere, are expected to take and pass the Qualifying Examination by the end of their second year in the program.

Unless the student elects a single three-hour oral examination on all four fields, the Qualifying Examinations will be taken separately in each of the fields, with the general American field coming at the end. For each of the fields (2), (3), and (4), as above, the student will choose one appropriate professor with the approval of the chairman of the program. That professor, in consultation with the student, will define the requirements, course of preparation, and mode of examination (written and/or oral) for the field.

For the general American field, the Chairman will appoint two members of the Executive Committee as examiners. The student may choose a one-hour oral examination or a three-hour written examination followed, if the examiners so require, by an oral examination. In either case, the two professors in consultation with the student will define in advance the major themes or problems on which the examination will be based. So far as possible, fields (3) and (4), as above, should be selected with a view to broadening and deepening the student's understanding of his or her American history fields, and providing valuable background for the dissertation work.

With the consent of the Chairman and the professor concerned, qualified students in appropriate cases may be examined in fields (3) or (4), as above, by a faculty member at another university. Moreover, with the consent of the Executive Committee, examinations in fields (3) or (4), as above, may be waived for students with the M.A., J.D., or other advanced degrees that represent a level or kind of training and achievement fully equivalent to those required in the Brandeis examinations for those fields.

A student may be admitted to candidacy for the Ph.D. degree upon satisfactory completion of the following: course and residence requirements, demonstration of a high level of proficiency in one foreign language, the qualifying examinations, and when the prospectus for a dissertation is approved by the Executive Committee.

When the dissertation is accepted by the Committee, a final oral examination will be scheduled at which the candidate must successfully defend his or her dissertation before the Committee and other members of the faculty who may participate. After a candidate has successfully defended the dissertation, he or she will give a public lecture.

#### Admission to Candidacy.

#### Dissertation and Defense.

**Courses of Instruction**

History 190a.  
**Historiography**  Not offered 1984-1985.

207aA.  
**Topics in Political and Social Thought, with Emphasis on the Period 1750-1850** Mr. Meyers

History 200a.  
**Colloquium in European Comparative History Since the 18th Century** Comparative examination of major historical issues in Europe from the eighteenth through the twentieth centuries. Mr. Schuker

208aA.  
**Topics in Modern American Labor: Working-Class History** Mr. Keyssar

History 201b.  
**Colloquium in Early Modern Comparative History**  Not offered 1984-1985.

209aA.  
**Topics in Modern Intellectual History** Mr. Kloppenberg

History 202bR.  
**Seminar in Comparative History: Town and Country** Introduction to the methods of comparative history through a consideration of the problems of town and country in various historical contexts. Although designed primarily for graduate students this course is also open, with consent of the instructor, to qualified juniors and seniors with a substantial background in history or related fields. Mr. Black

210aA.  
**Topics in Environmental History** Mr. Worster

History 301-310. The following are available in either semester:  
**Readings in the History of American Civilization**  
301a or b. Mr. Bernstein  
303a or b. Mr. Demos  
304a or b. Mr. Fischer  
305a or b. Mr. Keller  
307a or b. Mr. Meyers  
308a or b. Mr. Keyssar  
309a or b. Mr. Kloppenberg  
310a and b. Mr. Worster

History 203b.  
**Seminar in Comparative History: Death in History**  Not offered 1984-1985.

The following courses are offered on a regular basis to groups of students who wish to use them in order to prepare for their general examinations.

History 201A-209aA.  
**Directed Research in American History** Students will normally elect one of the following in the fall term of the first and the second years. Each is designed to provide experience in designing, researching and writing a substantial essay of a monographic character, based on extensive use of sources. This is the equivalent of a full course and extends the due date for the final draft of the paper to March 1, to permit sufficient time for a major project. Specific research topics are selected by the student in consultation with the professor.

History 313-319.  
**Readings in the History of American Civilization**  
313a or b.  
**Colonial History, 1607-1750** Mr. Demos

314a or b.  
**American Social History, 1750-1870** Mr. Fischer

315a or b.  
**Political History, 1870-present** Mr. Keller

317a or b.  
**American Intellectual History, 1750-1870** Mr. Meyers

318a or b.  
**American Social History, 1870-present** Mr. Keyssar

319a or b.  
**American Intellectual History, 1870-present** Mr. Kloppenberg

320a or b.  
**Environment and History** Mr. Worster

201aA.  
**Topics in American Art and Architecture** Mr. Bernstein

203aA.  
**Topics in American Colonial History** Mr. Demos

204aA.  
**Topics in Social History, with Emphasis on the Early Republic** Mr. Fischer

205aA.  
**Topics in Modern America** Mr. Keller

History 401-410. <b>Dissertation Research</b>	401. Mr. Bernstein 403. Mr. Demos 404. Mr. Fischer 405. Mr. Keller 407. Mr. Meyers 408. Mr. Keyssar 409. Mr. Kloppenberg 410. Mr. Worster	History 159a. <b>Immigration and Immigrants in American History</b>	<input type="checkbox"/> Not offered 1984-1985
For courses available to History of American Civilization students in other historical areas, see the listings by department and programs in the Graduate School and College catalogs, especially under Comparative History.		History 159b. <b>Family and Society in American History</b>	<input type="checkbox"/> Not offered 1984-1985
In addition, the following courses may be taken as equivalent to History of American Civilization seminars:		History 160a. <b>Adams and America</b>	<input type="checkbox"/> Not offered 1984-1985
History 150a. <b>Colonial America: People, Culture and Society</b>	<input type="checkbox"/> Not offered 1984-1985	History 161a. <b>The American Political Tradition: Origins of the Civil War</b>	Mr. Meyers
History 151a. <b>Revolution and Constitution: Founding the American Republic</b>	<input type="checkbox"/> Not offered 1984-1985	History 161b. <b>The American Polity</b>	Mr. Kloppenberg
History 151b. <b>Male and Female in the American Past</b>	<input type="checkbox"/> Not offered 1984-1985	History 162b. <b>The American Political Tradition Since the Civil War</b>	Mr. Kloppenberg
History 152bR. <b>Democracy in America: Tocqueville and The Age of Jackson</b>	Mr. Meyers	History 163a. <b>American Foreign Relations in the Twentieth Century</b>	<input type="checkbox"/> Not offered 1984-1985
History 154b. <b>The History of Modern America</b>	<input type="checkbox"/> Not offered 1984-1985	History 167b. <b>Topics in American Legal History</b>	<input type="checkbox"/> Not offered 1984-1985
History 156a. <b>American Social History, 1750-1860</b>	Mr. Fischer	History 168a. <b>American Politics and Ideas, 1890-1930</b>	<input type="checkbox"/> Not offered 1984-1985
History 156b. <b>American Society: An Analytical History, Civil War to the Present</b>	<input type="checkbox"/> Not offered 1984-1985	History 169a. <b>Thought and Culture in Modern America</b>	<input type="checkbox"/> Not offered 1984-1985
History 158a. <b>Working Class History in the United States</b>	Mr. Keyssar	History 191a. <b>History and Psychology</b>	<input type="checkbox"/> Not offered 1984-1985
History 158b. <b>The United States in the 1930s</b>	Mr. Keyssar	American Studies 101a. <b>Ecological History of North America</b>	Mr. Worster
		American Studies 133bR. <b>The American West</b>	Mr. Worster

## Joint Program of Literary Studies

Comparative Literature, French, German, Russian and Spanish

### Objectives

The joint program of literary studies accepts students desirous of obtaining an M.A. and/or Ph.D. degree in one of the areas listed above. Interdisciplinary in design, the program aims to train literary scholars and teachers whose professional capabilities will be broader than their individual specialties. Students will have the opportunity to study the theory of literature, history and theory of literary criticism, and scholarly methodology in addition to the specific literatures in which the degree will be earned. A small and carefully selected student body will work closely with the faculty of the program and with one another in a core curriculum before specializing. Students are encouraged to plan an individual program of studies within their field of interest in consultation with their adviser(s). Although the program encourages individual initiative, with the advice and consent of adviser(s), it should be stressed that all students, whatever their areas, must master the basic literature, primary and secondary, in their field. The General Examinations will assume both breadth and depth of such knowledge. (Reading lists for each area are available.)

### Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. Applications must be received no later than March 1. Please be sure to mark clearly the **area** of your choice (Comparative Literature, French, German, Russian or Spanish) on the application form. Each applicant must submit one or more college-level essays on a literary subject (one of which should be written in English) as a sample of work.

### Faculty

Committee:  
Associate Professor  
**Robert Szulkin**,  
Chair  
(Russian)

Professor  
**Edward Engelberg**  
(Comparative  
Literature)

Professor  
**Denah Lida**  
(Spanish)

Professor  
**Murray Sachs**  
(French)

Professor  
**Harry Zohn**  
(German)

In addition, all faculty members of the Departments of Germanic and Slavic Languages and Romance and Comparative Literature participate in this program.

### Degree Requirements

#### Master of Arts

Students who have completed two years of full-time study in residence may be awarded the M.A. degree. Such students must be in good standing (no incompletes). In addition, such students must have passed the language requirement, either by certification and/or examination, as follows: single area candidates: one foreign language **other** than the major language. Finally, such students must have passed satisfactorily the Qualifying Examinations.

#### Doctor of Philosophy

#### Program of Study.

Individual programs of study will be arranged between students and their advisers. The core curriculum consists of several elements: all students in the program are obligated to enroll in Literary Studies 201 (The History and Theory of Criticism); all students will be held responsible for certain works on literary theory, literary history and aesthetics (not studied in the criticism seminars) at the time of General Examination.

Although the program is designed to permit students to develop their studies coincident with their interests and talents, and in consultation with their adviser(s), full-time students are expected to enroll in at least **three** literary studies seminars each year during the first two years of residence. In addition to Literary Studies 201, first-year students are expected to augment this schedule with **at least** two additional seminars from the literary studies offering.

Residence Requirements.	The minimum residence requirement is two years of full-time study beyond the bachelor's degree. Additional course work during the third year is generally recommended.	Dissertation and Defense.	The completed dissertation must be read and found acceptable by its director and two other readers before the candidate is eligible for the Final Oral Examination. The Final Oral Examination will be conducted by a committee of not less than four, one of whom must come from outside the candidate's area.
Language Requirement.	Students will be asked to demonstrate a reading competence in <b>at least</b> two foreign languages to be determined in consultation with their advisers. In certain areas of specialization, additional languages (e.g., Latin) may become necessary research tools. (Comparative literature students should consult the special statement of language requirements below.) Students must be certified in at least one language by the end of the first year in residence.	Teaching.	All students in the program are expected to do some supervised teaching, either as a teaching assistant or by means of other arrangements. In some areas, where teaching assistantships may at times be unavailable, students will be expected to fulfill some teaching opportunities (occasional class lectures, for example) without remuneration.
Qualifying Examinations.	Qualifying examinations must be taken at the start of a student's second full year in residence, with the purpose of determining that the student is qualified to study literature productively at the graduate level. Only students who have a complete and satisfactory record for their first year will be permitted to take the Qualifying Examinations. <b>No postponement of these examinations is allowed.</b> The examinations are both written and oral, and will be scheduled each year for the third or fourth week in September. The examinations are prepared and conducted by a three-member faculty committee chosen at the end of the first year of study by the candidate in consultation with the candidate's faculty adviser. At the outcome of the examination, the candidate receives a detailed written evaluation from the three-member committee, based on the written and oral performances and on the entire record of the candidate's first year in residence.	For Candidates in Comparative Literature.	<p>1. Any student in the program who declares candidacy in comparative literature should decide, as soon as possible, on a <b>major</b> and <b>minor</b> literature. The <b>major</b> literature must be one of those offered by either the Department of Germanic and Slavic Languages or Romance and Comparative Literature (but not Italian). The <b>minor</b> literature may be Italian, English, American or any other literature offered by the University. Exact "proportions" cannot be stated in advance and will be worked out in consultation between students and adviser(s).</p> <p>2. Candidates in comparative literature are expected to take three language examinations follows:</p> <p>a. The major language, which should be near level of mastery (reading, writing and speaking) on acceptance to the program. Students may simply be "certified" for this language if their level of competence is obvious.</p> <p>b. The second foreign language should be mastered as a reading language with a fluency that will permit easy access to all primary and secondary literature in the specified area.</p> <p>c. The third foreign language should be a reading tool for primary and especially secondary materials.</p> <p>It is quite possible that for certain areas of specialization — Medieval, Renaissance, etc. — additional languages will become necessary (e.g., Latin, Catalan, Old French).</p>
General Examinations.	Students may take the General Examinations, which demonstrate full competency in their chosen discipline, whenever they and their advisers feel they can appropriately do so. However, all students are expected to have completed the General Examinations no later than the fall semester of their fourth year in residence. Examinations will be offered twice each academic year, in October and May, and will consist of three written examinations and an oral examination. Details about the contents and procedures are available on request.		
Admission to Candidacy.	Candidates will be recommended for admission to doctoral candidacy when the residence and language requirements have been met, the General Examinations have been successfully passed, and a prospectus of the candidate's proposed dissertation topic has been approved by a committee of the area concerned.		

## Courses of Instruction

Literary Studies 201a.

**History and Theory  
of Criticism: The  
Development of  
Modern Critical  
Theories**

Mr. Gendzier

Literary Studies  
202bR.**Fiction: Theory and  
Practice**

Mr. Sachs

Literary Studies

□ Not offered 1984-1985

203aR.

**Romantic  
Phenomena**Literary Studies  
204bR.**Theory and Practice  
of Literary  
Translation**

Mr. Zohn

Literary Studies

□ Not offered 1984-1985

205a.

**Crosscurrents in the  
French and English  
Enlightenments**

Literary Studies 206b. □ Not offered 1984-1985

**The Comic in  
Literature: Theory  
and Practice**

Literary Studies 207a. □ Not offered 1984-1985

**Marxist Criticism:  
Literature and  
Society in Early  
Modern Europe**

Literary Studies 208b. □ Not offered 1984-1985

**Cervantes in his  
European Context:  
Heritage and  
Lineage**

Literary Studies 209aR.

**Modern Phenomena**

Literary Studies 210b. □ Not offered 1984-1985

**Genesis and  
Development of a  
Myth: Don Juan****Literary Studies 211a.** □ Not offered 1984-1985**The Tragic in  
Literature**

Literary Studies 212b. □ Not offered 1984-1985

**Techniques of  
Stylistic Analysis**

Literary Studies 213b. □ Not offered 1984-1985

**Modes of the  
Grotesque in Art  
and Literature**

Literary Studies 214a. □ Not offered 1984-1985

**Biography-  
Autobiography and  
Related Genres**Literary Studies  
301-305.**Readings in Area  
Studies: Tutorials**301a and b.  
**Comparative  
Literature. Readings  
in Comparative  
Texts**

Mr. Engelberg and Staff

302a and b.  
**French. Readings in  
French Texts**

Mr. Sachs and Staff

303a and b.  
**German. Readings in  
German Texts**

Mr. Zohn and Staff

304a and b.  
**Russian. Readings in  
Russian Texts**

Mr. Szulkin and Staff

305a and b.  
**Spanish. Readings in  
Spanish Texts**

Ms. Lida and Staff

Literary Studies  
351-355.**Directed Research**Open to advanced graduate students with the consent of the instructor  
and the chairman of the Literary Studies Program.351a and b.  
**Comparative  
Literature**

Mr. Engelberg and Staff

352a and b.  
**French**

Mr. Sachs and Staff

353a and b.  
**German**

Mr. Zohn and Staff

354a and b.  
**Russian**

Mr. Szulkin and Staff

355a and b.  
**Spanish**

Ms. Lida and Staff

Literary Studies 400.

**Dissertation  
Research**

Staff

Following is a list of selected courses in each of the areas that constitute the Joint Program of Literary Studies, which may be of special interest to graduate students. For a full list of all courses available consult the undergraduate catalog under Departments of Germanic-Slavic Languages and Romance and Comparative Literature.

### Comparative Literature

Comparative Literature 102aR.  Not offered 1984-1985

#### **The Medieval Vision of Love**

Comparative Literature 103b.  A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare, Jonson and Cervantes.

Mr. Lansing

Comparative Literature 104a.  An examination of writing at the threshold of the modern era, when traditional relations of power were disrupted by scientific discovery, technological advance and social change. We will focus on the scientific imagination, the challenge to political and religious authority and transformations in sexual politics. Readings in Descartes, Bacon, de Bergerac, Aphra Behn, Molière, Racine, Marlowe, Jonson, Galileo, Pascal, Fontenelle.

Ms. Harth

Comparative Literature 106a.  Not offered 1984-1985

#### **The Age of Doubt: European Romanticism**

Comparative Literature 107b.  Not offered 1984-1985

#### **The Age of Irony: European Modernism**

Comparative Literature 110b.  Not offered 1984-1985

#### **The Development of a Genre**

Comparative Literature 121b.  **Dancing the Orange: Studies in Poetic Resonance**

Comparative Literature 125a.  **Women in Literature**

Not offered 1984-1985

A study of cultural and personal assumptions writers bring to the characterizations of women. Works by women authors are emphasized.

Ms. Collard

Comparative Literature 127b.  **The Rise of the Modern Short Story**

A study of the emergence and development of the modern short story as a new literary genre in the nineteenth century, with some attention to defining those characteristics of the genre which most clearly differentiate it from the novel. Works by such exemplary writers as Merimée, Gogol, Poe, Maupassant, Verga, Anatola France and Chekhov will be examined.

Mr. Sachs

Comparative Literature 137a.  **Dada and Surrealist Practice**

Not offered 1984-1985

Comparative Literature 141b.  **The Picaresque Novel**

Not offered 1984-1985

Comparative Literature 144b.  **The Outsider as Artist and Lover**

Autobiographical, philosophical and literary writings of Kierkegaard, Baudelaire, and Kafka who exemplify the struggle to achieve meaning in an antagonistic age. All were "alienated" writers who believed that their dedication to art or God required them to renounce love and marriage. We shall explore the interrelation of creativity, religious experience and human intimacy in their writings, using Martin Buber to define these problems in today's terms.

Mr. Kaplan

Comparative Literature 145aR.  **In Praise of Folly**

Not offered 1984-1985

Comparative Literature 170bR.  **Tragedy and Modernism: Buchner to Beckett**

This course examines the modern "tragic view of life" as it is expressed in various attempts to reclaim tragedy on the stage: realistic tragedy (Strindberg, Ibsen, Miller); poetic tragedy (Yeats, Lorca, Synge, Eliot); modern versions of ancient myths (O'Neil, Sartre, Anouilh); Pirandello.

Mr. Engelberg

Comparative Literature 174a. <b>Sex, Class and Literature in Europe, 1830-1914</b>	<input type="checkbox"/> Not offered 1984-1985	French 110a. <b>Introduction to French Literature</b>	A survey of representative French works from the Middle Ages to the twentieth century. This course is intended to follow French 14 and carefully to prepare students to read and interpret a variety of literary genres: poetry, short story, theater, novel. Readings, lectures, class discussions and writing will be done in French. Among the authors studied will be Ronsard, Pascal, Racine, Rousseau, Hugo, Baudelaire, Flaubert.
Comparative Literature 175b. <b>The psychological Novel</b>	<input type="checkbox"/> Not offered 1984-1985		Mr. Kaplan
Comparative Literature 185a. <b>Dickens and Dostoevsky</b>	<input type="checkbox"/> Not offered 1984-1985	French 112a. <b>The French Middle Ages</b>	<input type="checkbox"/> Not offered 1984-1985
Comparative Literature 186a. <b>Sex and Sensibility in Pre-Revolutionary European Novels</b>	<input type="checkbox"/> Not offered 1984-1985	French 116b. <b>The French Renaissance</b>	An examination of sixteenth century French literature as it comes to terms with cultural renewal. Background: the Italian influence; Humanism and Protestantism; Platonism. Readings from Rabelais, the Pleiade (Ronsard and Du Bellay), Montaigne and others.
Comparative Literature 187b. <b>Fictive Knowledge in the Twentieth Century</b>	<input type="checkbox"/> Not offered 1984-1985		Mr. Joseph
Comparative Literature 193a. <b>Native American Literature</b>	Representative works, traditional and modern, ranging from Navaho ceremonial through Black Elk's autobiography and up to important modern novels like Leslie Marmon Silko's <i>Ceremony</i> will be read with a view to establishing a composite picture of human experience, sacred and profane, as configured by the native American imagination.	French 118b. <b>The French Enlightenment</b>	The origins of Romanticism and Realism; modern notions of tolerance, the pursuit of happiness, feminism; conflicts between primitivism and progress, rationalism and experience, secular humanism and religious morality. These themes will be analyzed in such writers as Cyrano de Bergerac, Fontenelle, Bayle, Montesquieu, Voltaire, Diderot, Rousseau and Sade.
French	Mr. Yglesias		Mr. Gendzier
French 106bR. <b>Advanced Conversation and Composition</b>	An intensive course in speaking and writing French. Both conversational and compositional skills will be developed through class discussions and regular writing assignments based on suitable contemporary reading materials, such as newspaper articles. Prerequisite: Concentration in French or permission of instructor.	French 119a. <b>French Romanticism</b>	The Romantic Revolution dominated France during the first half of the nineteenth century. We shall study Victor Hugo's central contributions and principal works of fiction; poetry and drama by Balzac, Lamartine, Vigny, Musset. Selections from Baudelaire will exemplify the breakdown of French Romanticism.
French 109b. <b>Contemporary French Civilization</b>	Mr. Rabaté		Mr. Kaplan
	This course is designed for those who seek to acquire a working knowledge of the social, cultural, economic and political context of contemporary France, while seeking, at the same time, to develop fluency in French. It is also of interest to students contemplating study abroad, as well as careers in international business, government and law. The course centers around thematic dossiers composed of recent essays and press articles, slides, films and recordings.	French 123b. <b>The Feminine Tradition in French Literature</b>	<input type="checkbox"/> Not offered 1984-1985
	Ms. Marx-Scouras	French 138b. <b>Nineteenth Century French Fiction</b>	<input type="checkbox"/> Not offered 1984-1985

French 140b. <b>Twentieth Century French Drama</b>	This course will examine the relationship between modern theater and important elements of twentieth century French culture, notably history, literature and philosophy. Texts include Jarry, Giraudoux, Claudel, Sartre, Camus, Adamov, Beckett, Anouilh, Genet and Artaud. In addition, the class will prepare the reading of a play of its own choosing. Prerequisite: French 14 or permission of instructor.	<b>German</b>
French 149a. <b>Twentieth Century French Fiction</b>	<input type="checkbox"/> Not offered 1984-1985	German 102aR. <b>German Literature before 1700</b>
French 155a. <b>Literature and Ideology</b>	<input type="checkbox"/> Not offered 1984-1985	German 106aR. <b>Advanced Composition and Style</b>
French 170b. <b>The Moralist Tradition in French Literature</b>	In this course, we shall illuminate the relationship between the moralist tradition in France (Montaigne, La Rochefoucauld, Diderot, Balzac) and the daily lives of their times. We shall locate the writers in their periods, place them geographically, outline their cultural and social frameworks, try to understand their collective mentality, their views of life and death, passion and reason, pleasure and pain.	Exercises and essays, ranging from simple letters, stories and dialogs to more complex analyses and argumentations, will improve personal writing style. Stylistic sensitivity and analytical abilities will be enhanced through the careful study of contemporary short stories, films, advertisements and, of course, samples from the great masters: Lessing, Heine, Nietzsche, Mann, Kafka, Grass. Prerequisite: German 14 or equivalent.
French 178a. <b>Fact and Fiction in France: The Uses of the Past</b>	Mr. Gendzler	Mr. Frey
French 180b. <b>Modern French Critical Thought</b>	<input type="checkbox"/> Not offered 1984-1985	German 110a. <b>Introduction to the Life and Works of Goethe</b>
French 185a. <b>Symbolism and Myth in Nineteenth Century France</b>	Mr. Sachs	German 120a. <b>Enlightenment, Storm and Stress, Idealism: Lessing, Lenz, and Schiller</b>
French 180b. <b>Modern French Critical Thought</b>	<input type="checkbox"/> Not offered 1984-1985	German 130b. <b>German Romanticism</b>
French 185a. <b>Symbolism and Myth in Nineteenth Century France</b>	<input type="checkbox"/> Not offered 1984-1985	German 140a. <b>German Literature in the Nineteenth Century</b>
French 185a. <b>Symbolism and Myth in Nineteenth Century France</b>	<input type="checkbox"/> Not offered 1984-1985	German 150a. <b>The Jewish Contribution to German Literature</b>
French 180b. <b>Modern French Critical Thought</b>	<input type="checkbox"/> Not offered 1984-1985	German 160b. <b>German Drama and Lyric Poetry from Naturalism to the Second World War</b>
French 185a. <b>Symbolism and Myth in Nineteenth Century France</b>	<input type="checkbox"/> Not offered 1984-1985	German 170b. <b>German Literature Since the "Year Zero" (1945)</b>
French 185a. <b>Symbolism and Myth in Nineteenth Century France</b>	<input type="checkbox"/> Not offered 1984-1985	German 180a. <b>Twentieth Century Prose: Mann, Kafka, Hesse</b>

Not offered 1984-1985

A survey of the work of these three important authors in the context of early twentieth century literary movements. Special emphasis will be given to close analysis and discussion of selected texts. Lectures and readings in German.  
Prerequisite: German 14 or equivalent

German 190bR. <b>Vienna at the Turn of the Century</b>	<input type="checkbox"/> Not offered 1984-1985	Russian 146a. <b>Dostoevsky</b>	<input type="checkbox"/> Not offered 1984-1985
German 195b. <b>The Culture of the Weimar Republic</b>	The focal point will be Berlin in the troubled but fecund decade-and-a-half between the end of World War I and the accession of the Hitler regime. The course will explore aspects of the culture of the time, including literature and music (serious and popular), art and architecture (Grosz and Gropius), the Neue Sachlichkeit (new sobriety) in its various manifestations, the theater of Max Reinhardt and Erwin Piscator, the musical theater of Brecht and Weill, the satire of Kurt Tucholsky and Erich Kaestner, and the fabled cabarets of Berlin.	Mr. Zohn	<input type="checkbox"/> Not offered 1984-1985
<b>Russian</b>			
Russian 106b. <b>Advanced Composition, Conversation and Reading</b>	Conducted entirely in Russian. Prerequisite: Russian 3a or equivalent.	Ms. Dalton	Russian 148a. <b>Survey of Russian Theater from 1719 to 1917</b>
Russian 110a. <b>Advanced Readings in Russian</b>	<input type="checkbox"/> Not offered 1984-1985	Mr. Szulkin	Russian 148bR. <b>A Survey of Twentieth Century Russian Theater: Chekhov to the Present</b>
Russian 130a. <b>Nineteenth Century Russian Literature</b>	A comprehensive survey of the major writers and themes of the nineteenth century, including Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov and others. Conducted in English. Readings available in Russian and in English translation.	Ms. Dalton	Russian 149b. <b>Twentieth Century Russian Literature, Art and Theater</b>
Russian 134bR. <b>Stories and Plays of Chekhov</b>	A detailed chronological investigation of the evolution of Chekhov's art — a blend of realism and symbolism. Emphasis on the major themes, method of characterization and literary style of the stories; his innovative techniques in drama; certain thematic parallels between the late stories and the plays. Conducted in English, with readings available in Russian for concentrators and in English translation.	Ms. Dalton	We will focus on the three decades 1900-1930 and their various artistic movements (Futurism, Constructivism, Imagism, Cubism, Dada, Surrealism) as reflected in literature, painting and theater. We will explore the interrelationships between these artistic movements and the political scene. Readings will illustrate the richness of this modern period of Russian culture.
Russian 161b <b>The Structure of Modern Russian</b>	<input type="checkbox"/> Not offered 1984-1985	Mr. Szulkin	Russian 161b <b>The Structure of Modern Russian</b>
<b>Spanish</b>			
Spanish 120a. <b>Cervantes: In Depth Study of <i>Don Quijote</i></b>	<input type="checkbox"/> Not offered 1984-1985	Spanish 130a. <b>Nineteenth Century Spanish Literature</b>	<input type="checkbox"/> Not offered 1984-1985
Spanish 140aR. <b>Masters of Spanish Poetry</b>	Topic: Major transformations of the lyric from the Middle Ages to the Civil War.	Spanish 140aR. <b>Spanish Drama of the Siglo de Oro</b>	Mr. Iglesias
Spanish 150a. <b>Spanish Drama of the Siglo de Oro</b>	<input type="checkbox"/> Not offered 1984-1985	Spanish 160a. <b>Studies in Latin America Literature I</b>	<input type="checkbox"/> Not offered 1984-1985
Spanish 160bR. <b>Readings in Latin American Literature II</b>	Ms. Mendez-Faith	Spanish 160a. <b>Studies in Latin America Literature I</b>	<input type="checkbox"/> Not offered 1984-1985

Spanish 161a. <b>Masters of Modern Latin American Poetry</b>	<input type="checkbox"/> Not offered 1984-1985	Spanish 181a. <b>Revolt in Spain: Literature and Painting</b>	<input type="checkbox"/> Not offered 1984-1985
Spanish 162b. <b>Studies in Argentine and Brazilian Literature</b>	A study of man and nature (Sarmiento, Hernández, da Cunha) and of the inner man (Machado de Assis, Borges, Cortázar).	Spanish 182b. <b>The Spanish Civil War: Cultural Cataclysm</b>	We will focus on works illustrating the background of the conflict, its development and far-reaching influence on the fiction, art, film, music theater, poetry and journalism of later decades. In works by Ayala, Matute, Gironella, Picasso, Hernandez, Hemingway, among others, we will examine such motifs as the accommodation of the arts to various political persuasions, the exile experience, and coming home.
Mr. Duffy		Mr. Larsen	
Spanish 163b. <b>Colonial and Nineteenth Century Latin American Literature</b>	<input type="checkbox"/> Not offered 1984-1985		
Spanish 170b. <b>The Generation of 1898</b>	<input type="checkbox"/> Not offered 1984-1985	Spanish 183a. <b>Images of Spain</b>	An examination of Spain's contribution to the western world's outstanding archetypes as seen in her writers and painters. Parallel views in literature and art will be studied. Works and artists covered include <b>The Cid</b> , <b>Celestina</b> , <b>Lazarillo</b> , St. Teresa, St. John of the Cross, <b>Don Quixote</b> , <b>The Trickster of Seville</b> ; El greco, Velazquez, Goya, Dore, Picasso.
Spanish 180bR. <b>Twentieth Century Spanish Peninsular Literature: Narrative</b>	A critical analysis of various prose narrative works, with particular emphasis on the novel. Various movements, stylistic experiments, themes, types and motifs, from after the Generation of 1898 to the present, will be examined. Works by Pérez de ayala, Miró, Sender, Matute, Delibes, Cela and Juan Goytisolo, among others, will be studied.	Mr. Larsen	Ms. Lida

## Mathematics

### Objectives

The graduate program in mathematics is designed primarily to lead to the Doctor of Philosophy degree. The formal course work is devoted to giving the student a broad foundation for work in modern pure mathematics. An essential part of the program consists of seminars on a variety of topics of current interest in which mathematicians from Greater Boston often participate. In addition, the Brandeis-Harvard-M.I.T. Mathematics Colloquium gives the student an opportunity to hear the current work of eminent mathematicians from all over the world.

### Admission

The general requirements for admission to graduate work in mathematics are the same as those for the Graduate School as a whole. The Department has available a variety of fellowships and scholarships for well-qualified students. To be considered for such financial support the student should submit an application by February 15.

### Faculty

Professor **Teruhisa Matsusaka**, Chair: Algebraic Geometry. Classification and Deformations of Algebraic Varieties.

Professor **Maurice Auslander**: Non-commutative Algebra. Homological Algebra.

Professor **Edgar H. Brown Jr.**: Algebraic Topology: Manifolds, Cobordism, Surgery, Homotopy Theory.

Professor **David A. Buchsbaum**: Commutative Algebra. Homological Algebra.

Professor **David Eisenbud**: Commutative Algebra. Algebraic Geometry. Knot Theory and Singularities of Complex Varieties.

Professor **Harold I. Levine**: Differential Topology. Singularities of Differential Maps.

Professor **Jerome P. Levine**: Differential Topology. Knot Theory and Related Algebra.

Professor **Alan L. Mayer**: Classical Algebraic Geometry and Related Topics in Mathematical Physics.

Professor **Paul B. Monsky**: Number Theory. Arithmetic Algebraic Geometry.

Professor **Richard S. Palais**: Non-linear Partial Differential Equations. Calculus of Variations in Geometry of Mathematical Physics. Transformation Groups.

Professor **Gerald W. Schwarz**: Smooth and Algebraic Transformation Groups, especially Orbit Structures.  $C^\infty$  Functions on  $R^n$ .

Visiting Professor **Pierre van Moerbeke**: Stochastic Processes. Korteweg-de Vries Equation. Toda Lattices.

Associate Professor **Mark Adler**: Analysis: Differential equations, completely integrable systems.

Associate Professor **Michael Harris**: Arithmetic of Abelian Varieties Over Number Fields. Class Field Theory.  $P$ -adic Representation Theory. L-Functions.

Visiting Assistant Professor **Gabriel Katz**: Algebraic Topology, Topology of smooth manifolds.

Associate Professor **Kiyoshi Igusa**: Algebraic K-Theory.

Assistant Professor **Ira Gessel**: Theoretical Computer Science, enumerative combinations.

Assistant Professor **Robert Indik**: Number Theory.

Visiting Assistant Professor **Thomas Parker**: Differential Geometry and the Geometry of Mathematical Physics.

Assistant Professor **Steven Rosenberg**: Differential Geometry and Analysis of Manifolds.

Assistant Professor **James Scovel**: Geometry on Non-Linear Partial Differential Equations.

## Degree Requirements

### Master of Arts

1. One year's residence as a full-time student.
2. Successful completion of an approved schedule of courses.
3. Satisfactory performance in the basic courses in algebra, analysis, topology and geometric analysis —or equivalent examinations (see Program of Study).
4. Proficiency in reading French, German, or Russian.

### Doctor of Philosophy

1. Residence as a full-time student for two years.
2. Successful completion of an approved schedule of courses.
3. Superior performance in the basic courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
4. Participation in the Second-Year Seminar.
5. Superior performance in the Qualifying Examination.
6. Proficiency in reading two of French, German or Russian.
7. Doctoral dissertation approved by the Department.
8. Successful defense of the dissertation.

### Program of Study.

The normal first year of study consists of Mathematics 101a and b, 111a and b, and 121a and b. In exceptional circumstances and only with the permission of the graduate adviser, a student with superior preparation may omit one or more of these courses and elect higher level courses instead. In this case he or she must take an examination in the equivalent material during the first year. The second year's work will normally consist of

### Qualifying Examination.

Mathematics 110a and higher level courses in addition to preparation for the qualifying examinations described below and participation in the second-year seminar. Upon completion of the qualifying examinations, the student will choose a dissertation adviser and begin work on a thesis. This should be accompanied by advanced courses and seminars.

The Qualifying Examination consists of two parts: a major examination and a minor examination. Both are normally taken in the latter part of the second year but may occasionally be postponed until early in the third year. For the major examination the student will choose a limited area of mathematics, e.g. differential topology, or several complex variables, or ring theory — and a major examiner from among the faculty. Together they will plan a program of study and a subsequent examination in that material. The aim of this study is to prepare the student for research toward the Ph.D. The minor examination will be more limited in scope and less advanced in content. The procedures are similar to those for the major examination, but its subject matter should be significantly different.

To be admitted to candidacy for the Ph.D. degree in Mathematics, the student must have successfully completed the qualifying examination, must demonstrate proficiency in reading French, German or Russian and must be recommended for candidacy by the department.

### Admission to Candidacy.

### Dissertation and Defense.

The doctoral degree will be awarded only after the submission and acceptance of an approved dissertation and after the successful defense of that dissertation.

## Courses of Instruction

### Mathematics 101a and b. Algebra I

Groups, rings, modules. Galois theory, affine rings and rings of algebraic numbers. Multilinear algebra. The Wedderburn Theorem. Other topics as time permits.

First Term: Mr. Monsky  
Second Term: Mr. Buchsbaum

### Mathematics 110a. Geometric Analysis

Manifolds, tensor bundles, vector fields and differential forms. Frobenius theorem. Integration, Stoke's theorem, and deRham's theorem.

Mr. Brown

### Mathematics 110b. Geometric Analysis

The correspondence between Lie groups and Lie algebras. Exponential map, homomorphisms, Lie sub groups, and homogeneous spaces. Representations of compact Lie groups.

Mr. Parker

### Mathematics 111a. Real Analysis

Measure and integration. Lp spaces, Banach spaces, Hilbert spaces. Radon Nikodyn, Riesz representation, and Fubini theorems. Fourier transforms.

Mr. Scovel

### Mathematics 111b. Complex Analysis

The Cauchy integral theorem, calculus of residues, and maximum modulus principle. Harmonic functions. The Riemann mapping theorem and conformal mappings. Other topics as time permits.

Mr. Adler

### Mathematics 121a and b. Topology I

Point set topology, fundamental group, covering spaces. Simplicial complexes, elementary homology and cohomology theory with applications. Manifolds and orientation, cup and cap products, Poincare duality. Other topics as time permits.

Fall Term: Mr. J. Levine  
Spring Term: Mr. Brown

### Mathematics 150aR. Mathematical Aspects of Information Science

For students with a strong mathematical background, interested in the theoretical underpinnings of computer science and the more mathematical aspects of real world computing.

Mr. Gessel

### Mathematics 200aR. Second Year Seminar

Mr. Scovel

Mathematics 201a. <b>Isolated Surface Singularities</b>	Resolution of surface singularities. Rational singularities from several points of view (rings of invariants, Dynkin diagrams, etc.). Simple elliptic singularities. Sheaves vs. representation theory for the simple singularities (Artin-Verdier).	Mathematics 296. <b>Seminar in Artin Rings and Representation Theory</b>	Research seminar; not normally taken for credit. Staff
	Mr. Eisenbud		
Mathematics 201b. <b>Topics in Representation Theory</b>	Some of the topics will be related to the contents of 201a, isolated surface singularities. Prospective students are advised to take this course if possible.	Mathematics 297. <b>Number Theory Seminar</b>	Research seminar; not normally taken for credit. Staff
	Mr. Auslander		
Mathematics 202a and b. <b>Algebraic Geometry I</b>	To be announced	Mathematics 299a and b. <b>Readings in Mathematics</b>	Staff
Mathematics 203a. <b>Algebraic Number Theory I</b>	Mr. Indik	Mathematics 302a. <b>Algebraic Geometry</b>	□ Not offered 1984-1985 Moduli spaces of curves. An introduction to their construction and to the geometry of $M_g$ and $M_{g,n}$ for $g$ .
Mathematics 203b. <b>Topics in Algebraic Number Theory</b>	Mr. Indik	Mathematics 311a and b. <b>Analysis III</b>	Topics in partial differential equations. Mr. Rosenberg
Mathematics 211a. <b>Analysis II</b>	Topics in mechanics and dynamical systems. Discussed will be both examples and theory in dynamical systems and in particular, in Hamilton mechanics. The course will develop all the tools necessary and will be elementary. At the same time we will discuss some recent developments. Mr. H. Levine	Mathematics 321a. <b>Topology III</b>	Mr. Katz
Mathematics 221a. <b>Topology II</b>	Elementary homotopy theory, fibrations, obstruction theory, and spectral sequences. Mr. Igusa	Mathematics 321b. <b>Topology III</b>	Mr. Igusa
Mathematics 221b. <b>Topology II</b>	Cohomology operations, characteristic classes, classifying spaces, elementary cobordism. Mr. J. Levine	Mathematics 324b. <b>Lie Groups</b>	□ Not offered 1984-1985
Mathematics 291. <b>Fellowship of the Ring — Seminar in Commutative Algebra</b>	Research seminar; not normally taken for credit. Staff	Mathematics 326a and b. <b>Topics in Algebraic Geometry and Commutative Algebra</b>	□ Not offered 1984-1985
Mathematics 293. <b>Topology Seminar</b>	Research seminar; not normally taken for credit. Staff	Mathematics 335a. <b>Topics in Lie Algebras</b>	Mr. Schwartz
Mathematics 295. <b>Algebraic Geometry Seminar</b>	Research seminar; not normally taken for credit. Staff	Mathematics 399a and b. <b>Readings in Mathematics</b>	Staff
		Mathematics +01-+15. <b>Research</b>	Independent research for the Ph.D. degree. +01. Mr. Auslander      +09. Mr. Schwarz +02. Mr. Brown      +10. Mr. Eisenbud +03. Mr. Buchsbaum      +11. Mr. Mayer +04. Mr. H. Levine      +12. Mr. Van Moerbeke +05. Mr. J. Levine      +13. Mr. Igusa +06. Mr. Matsusaka      +14. Mr. Adler +07. Mr. Monsky      +15. Mr. Harris +08. Mr. Palais

# Music

## Objectives

The graduate program in music, leading to the degrees of Master of Fine Arts and Doctor of Philosophy, is designed to provide a command of the craft of composition and an understanding of the nature, structural basis, and historical development of music.

The following general fields of study are offered in music:

- 1. Composition.** This program, emphasizing composition and supported by studies in analysis, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.
- 2. Music History.** This program, featuring studies in a variety of techniques including analysis applied to different repertoires and historical problems, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.
- 3. Applicants in music theory are welcomed, although no program specifically confined to theory is offered. The course of study is individually determined, in consultation with the faculty, to comprise courses in theory, analysis, history of theory, and music history, offered under the above two headings.**

Students must specialize in one of these areas, but composers are expected to undertake some work in music history and historians to acquire some competence in tonal writing.

## Admission

Only a limited number of students will be accepted. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Applicants for study in musical composition and theory are required to submit, in addition to a transcript of their undergraduate records, evidence of qualification in the form of examples of original work in musical composition and advanced work in musical theory. Applicants for admission in the history of music should submit examples of their pros writing on music as evidence of their ability to handle the language and specialized vocabulary. Undergraduate theses or term papers will be satisfactory. History applicants wishing to specialize in analysis should also submit examples of advanced work in musical theory. This work should be submitted together with the formal application for admission.

All applicants are expected to have some proficiency at the piano or an orchestral instrument. Information about this should be furnished when making formal application. A departmental written test in basic musicianship and analysis will be sent to all applicants; answers are to be submitted by mail on or before February 15.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the department on or before the final date specified in the Academic Calendar for filing "Application for Financial Aid." Readmission will be refused in cases where students have not demonstrated a capacity for acceptable graduate work.

## Faculty

Associate Professor  
**Allan R. Keiler,**  
Chair and Director of  
Graduate Studies

Professor  
**Caldwell Titecomb,**  
Co-Chair and  
Director of  
Undergraduate  
Studies

Professor  
**Martin Boykan**

Professor  
**Robert L. Marshall**

Associate Professor  
**James D. Olesen,**  
Acting Director of  
Performing Activities

Associate Professor  
**Harold S. Shapero,**  
Director of Electronic  
Studios

Associate Professor  
**Jessie Ann Owens**

Assistant Professor  
**Allen L. Anderson**

Assistant Professor  
**Eric Chafe**

Assistant Professor  
**Peter B. Child**

Assistant Professor  
**Edward C. Nowacki,**  
Theory Coordinator

Assistant Professor  
**Conrad M. Pope**

Lecturer with Rank of  
Assistant Professor  
**Ross Bauer**

Lecturer with Rank of  
Assistant Professor  
**David Hoose**

Lecturer  
**Lawrence Siegel**

Performing Artist in  
Residence  
**Sarah Mead**

Performing Artists in  
Residence  
**Lydian String  
Quartet:**

**Judith Eisenberg**  
**Mary Ruth Ray**  
**Rhonda Rider**  
**Wilma Smith**

## Degree Requirements

### Master of Fine Arts

#### Language Requirements.

Group A: French, German, Italian.

Group B: Spanish, Latin, Hebrew, Greek (and other languages at the discretion of the music faculty).

Candidates for the master's degree in Musical Composition and Theory must possess a reading knowledge of one language from Group A.

Candidates for the master's degree in History of Music must possess a reading knowledge of two languages from Group A.

Foreign language course credits will not in themselves constitute fulfillment of the language requirements for advanced degrees. All candidates must pass language examinations set or approved by the music faculty and offered periodically during the academic year. Students are urged to take these examinations at the earliest feasible date. In case of failure, an examination may be taken more than once.

#### Instrumental Proficiency.

At least moderate proficiency at the piano is required of all candidates for advanced degrees.

#### Residence Requirements.

Six full courses or the equivalent in half-courses at the graduate level, completed with distinction, and a thesis are required of all candidates.

The department normally allows credit for no more than one full course taken at another institution.

In general, the program of course work is completed in two academic years. It is suggested that students pursue no more than three full courses in any one year.

#### Examinations.

Shortly after their arrival, new graduate students will be expected to take an examination in the standard literature of music. Where deficiency occurs, examinations will be repeated.

Before the end of their second year of study, candidates for the degree of Master of Fine Arts must demonstrate their competence in both theory and history by means of a written general examination in their major field, and either by an examination or by one of the following alternatives in their minor field:

#### For candidates in composition

the successful completion of Music 182a (or b) or 184a (or b), or the equivalent (requiring prior approval by the graduate adviser) or of comparable courses taken elsewhere, will be accepted in lieu of a minor general examination in music history. The faculty reserves the right to evaluate the student's accomplishment in history courses not taken at Brandeis.

#### For candidates in music history

competence in theory can be demonstrated by the successful completion of at least one semester of Music 227, or by a written examination.

The following timetable is suggested for major general examinations: **For candidates in composition**, the composition examination may be taken during the first year and repeated if necessary in the second; the analysis portion of the examination will normally be taken during the second year. Examinations may be repeated in the third year only in the case of a student not proceeding beyond the master's degree. **For candidates in music history**, major general examinations will normally be taken during the second year; they may be repeated in the third year at the discretion of the faculty.

#### Thesis.

Candidates for the degree of Master of Fine Arts in Music are required to submit a thesis. For candidates in musical composition and theory, this will consist of a musical composition, its scope to be approved by the music faculty. For candidates in the history of music it will be an analytical or historical study on a topic acceptable to the music faculty. Candidates in the history of music may submit, in lieu of a separate thesis, revised copies of two seminar papers that have been certified by the seminar instructor and at least one other faculty member as demonstrating a high degree of competence in research and writing. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than December 1 for a February degree or March 1 for a May degree.

<b>Doctor of Philosophy</b>	Admission to the doctoral program is normally granted at the end of the second year of residence and is determined by the student's performance in course work and general examinations. For candidates in music history, acceptance may be deferred pending repetition of portions of the major examinations.	candidates in composition and theory, a semester of Music 200 or 299 is suggested; for candidates in history, an additional semester of Music 227.
<b>Residence Requirements.</b>	A minimum of eight full courses or the equivalent in half-courses at the graduate level, completed with distinction, are required of all candidates.	After meeting their language, residence, and general examination requirements, candidates for the Ph.D. must pass a special oral qualifying examination.
	In general, the program of course work will be completed in three academic years.	Students will be admitted to candidacy for the Ph.D. degree upon successful completion of the written and oral qualifying examinations, fulfillment of the language requirements, and the approval of a dissertation topic.
	Applicants who have done graduate work elsewhere may apply for transfer of credit for such work; a maximum of one year of residence may be granted.	Dissertation.
<b>Instrumental Proficiency.</b>	At least moderate proficiency at the piano is required of all candidates.	Candidates for the degree of Doctor of Philosophy in Composition must submit an original musical composition and a thesis on a theoretical or analytical subject. Candidates for the degree of Doctor of Philosophy in History of Music must submit a dissertation on a historical or analytical subject. Two copies of the doctoral dissertation, as well as an abstract of the dissertation not to exceed six hundred words in length, should be submitted to the department or committee chairman no later than December 1 for a February degree and March 1 for a May degree of the academic year in which the Ph.D. degree is to be conferred.
<b>Language Requirements.</b>	Candidates for the doctoral degree in the history of music must possess a reading knowledge of all three languages in Group A. If appropriate to the student's program, the music faculty may accept a language in Group B in lieu of Italian. Candidates in composition and theory must possess a reading knowledge of two languages in Group A.	Written dissertations should demonstrate the competence of the candidate as an independent investigation, his or her critical ability, and effectiveness of expression. Upon completion of the dissertation, the candidate will be expected to defend it in an oral examination.
<b>Examinations.</b>	Candidates for the Ph.D. degree have no additional written examination requirements in their major field beyond those for the M.F.A. In the minor field, doctoral-level examinations may, if desired, be replaced by the option of an additional semester of course work completed with distinction. For	

## Courses of Instruction

Except in the rarest circumstances, graduate credit is not allowed for courses numbered below Music 165.

Music 168a.  Not offered 1984-1985  
**Orchestration**

Music 171a.  Not offered 1984-1985  
**History of Music and Drama Criticism**

Music 180bR.  Not offered 1984-1985  
**Ethnomusicology**

Music 182a.  Not offered 1984-1985  
**Topics before 1750**

Music 184a.  Not offered 1984-1985  
**Topics After 1750**

<b>Music 194b. Problems in Cultural Historiography</b>	<input type="checkbox"/> Not offered 1984-1985
<b>Music 195a. Electronic Music</b>	Composition and recording of electronic music. Technical electronics as they apply to musical problems. To be announced
<b>Music 197a. Tutorial in the Analysis of Tonal Music</b>	<input type="checkbox"/> Not offered 1984-1985
<b>Music 197b. Tutorial in the Analysis of Twentieth Century Music</b>	Basic analytical problems of the music of the twentieth century approached through detailed study of a few representative works. Mr. Anderson
<b>Music Colloquium</b>	Discussions of special topics led by the faculty and occasional guests. Some of the sessions will include performances of new works. Required of all graduate students. <i>Non-credit.</i> Staff and Visiting Lecturers

Music 200aR. <b>Proseminar in Musicology</b>	A survey of the principal subject matters, problems, and techniques comprising the discipline of musicology.  To be announced	Music 227b. <b>Proseminar in Theory and Composition</b>	Mr. Anderson
Music 200b. <b>Proseminar in Musicology</b>	See Music 200a.  Mr. Keiler	Music 228a. <b>Seminar in Twentieth Century Techniques</b>	<input type="checkbox"/> Not offered 1984-1985
Music 203. <b>Advanced Musical Analysis</b>	<input type="checkbox"/> Not offered 1984-1985	Music 233a. <b>Topics in Analysis</b>	Mr. Anderson
Music 204b. <b>Proseminar in Style and Analysis</b>	<input type="checkbox"/> Not offered 1984-1985	Music 233b. <b>Topics in Analysis</b>	Mr. Chafe
Music 221b. <b>Seminar in the Music of the Middle Ages</b>	Mr. Nowacki	Music 244b. <b>Berlioz</b>	<input type="checkbox"/> Not offered 1984-1985
Music 222b. <b>Seminar in the Music of the Renaissance</b>	To be announced	Music 246a. <b>Stravinsky</b>	<input type="checkbox"/> Not offered 1984-1985
Music 223a. <b>Seminar in Baroque Music</b>	<input type="checkbox"/> Not offered 1984-1985	Music 270a. <b>Seminar in Serial Music</b>	<input type="checkbox"/> Not offered 1984-1985
Music 224. <b>Seminar in Pre-Classical and Classical Music</b>	<input type="checkbox"/> Not offered 1984-1985	Music 292a. <b>Seminar in Composition</b>	Group meetings and individual conferences. Opportunities for the performance of student works will be provided.  Section 1: Mr. Shapero Section 2: To be announced
Music 225. <b>Seminar in Romantic Music</b>	<input type="checkbox"/> Not offered 1984-1985	Music 292b. <b>Seminar in Composition</b>	Section 1: Mr. Shapero Section 2: To be announced
Music 226a. <b>History and Literature of Western Music Theory: Baroque to 1850</b>	Mr. Chafe	Music 299a and b. <b>Individual Research and Advanced Work</b>	Staff
Music 226b. <b>History and Literature of Western Music Theory: 1850 to the Present</b>	<input type="checkbox"/> Not offered 1984-1985	Music 401-411. <b>Dissertation Research</b>	Required of all doctoral candidates 401. Mr. Boykan 402. Mr. Marshall 403. Mr. Shapero 405. Mr. Titcomb 406. Ms. Owens 407. Mr. Keiler 408. Mr. Chafe 409. Mr. Pope 410. Mr. Nowacki 411. Mr. Anderson
Music 227a. <b>Proseminar in Theory and Composition</b>	Technical projects in theory and composition; tonal forms and contrapuntal techniques.  Mr. Anderson	Electronic Music Studios	Two studios with facilities for the composition of electronic music are available to qualified student composers.  Director: Mr. Shapero

## The Philip W. Lown School of Near Eastern and Judaic Studies

The Lown School is the center for all programs of teaching and research in the areas of Judaic Studies, Ancient Near Eastern Studies and Islamic and Modern Middle Eastern Studies. The school includes the Department of Near Eastern and Judaic Studies, the Hornstein Program for Jewish Communal Service and the Center for Modern Jewish Studies. The Department of Near Eastern and Judaic Studies offers academic programs in the major areas of its concern. The Horn-

stein Program is a professional training program leading to the Master of Arts degree in Jewish Communal Service. It makes full use of academic resources of the Department of Near Eastern and Judaic Studies and other departments in the university.

The Center for Modern Jewish Studies conducts, and serves to stimulate, research and teaching in Contemporary Jewish Studies, primarily in the field of American Jewish Studies.

### Near Eastern and Judaic Studies

#### Objectives

The graduate program in Near Eastern and Judaic Studies, leading to the Master of Arts and Doctor of Philosophy degrees, is designed to train scholars and teachers in the various cultures of the Near East and of classical and modern Judaic civilization, and to advance scholarly research in these areas. This work is done mainly through study of the relevant languages and literatures and the interpretation of historical sources.

#### Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this department.

#### Faculty

Associate Professor **Leon A. Jick**, Chair: Contemporary Jewish history.

Professor **Marvin Fox**, Director of the Lown School: Jewish philosophy. Rabbinic thought. Modern Jewish thought.

Professor **Naftali C. Brandwein**: Modern Hebrew literature.

Professor **Alfred L. Ivry**: Jewish philosophy. Islamic philosophy.

Professor **Jehuda Reinhartz**: Modern Jewish history. History of Zionism.

Professor **Nahum M. Sarna**: Biblical studies. Dead Sea Scrolls. Ugaritic. Northwest Semitic inscriptions.

Professor **Marshall Sklare**, Director of the Center for Modern Jewish Studies: Sociology of the Jewish community.

Professor **Dwight W. Young**: Ancient Near East civilization. Assyriology. Ugaritic. Biblical studies.

Visiting Associate Professor **Tzvi Abusch**: Assyriology. Religions and cultures of the Ancient Near East.

Associate Professor **Michael Fishbane**: Biblical studies. Dead Sea Scrolls.

Associate Professor **Avigdor Levy**, Director of Islamic and Middle Eastern Studies: Middle Eastern studies.

Associate Professor **Benjamin C. I. Ravid**, Director of Graduate Studies: Jewish history.

Associate Professor **Bernard Reisman**: Jewish communal service.

Associate Professor **Gary Tobin**: Jewish Community Research and Planning.

Visiting Associate Professor **Peter Medding**: Jewish political studies.

Assistant Professor **Aaron Katchen**: Second Commonwealth and Hellenistic Judaism. Early modern Jewish history.

Assistant Professor **Reuven Kimelman**: Talmud and Rabbinic literature.

Assistant Professor **Jay Brodbar-Nemser**: Modern Jewish studies.

Lecturer **Charles Cutler**: Judaic bibliography.

Lecturer **Miroslav Krek**: Islamic bibliography.

#### Program of Study

Among the main fields in the area of Near Eastern and Judaic Studies in which courses are being given in the Graduate School are: Ancient Near East Studies. Biblical Studies. Jewish History. Hebrew Literature. Jewish Thought.

Jewish Philosophy. Medieval and Modern. Islamic Philosophy. Ottoman History. The Modern Middle East. Contemporary Jewish Studies.

The department regularly offers additional courses in related fields.

## Degree Requirements

### Master of Arts

Residence Requirements.	Two years of full-time residence will be required at the normal course rate of seven courses each academic year.	Language Requirements.	Candidates will be required to establish competence in Hebrew or Arabic as well as in two European languages, normally French and German. Additional languages may be required as necessary for research in each individual candidate's field.
Language Requirements.	Candidates will be required to establish competence in Hebrew or Arabic as well as in one European language, normally either French or German.	Comprehensive Examinations.	All candidates for the Ph.D. degree are required to pass three comprehensive examinations. The first examination in each field will be a written comprehensive qualifying examination covering the field as a whole. The second and third examinations will usually be oral and will cover more specialized subjects within the candidate's field.
Comprehensive Examination.	All candidates for the Master of Arts degree are required to pass a comprehensive examination.	Admission to Candidacy.	A student registered for studies leading to the Ph.D. degree becomes a candidate for that degree upon fulfillment of the residence requirements, when he/she has passed the comprehensive examinations, fulfilled the language requirements, and has had a dissertation proposal approved by the department.
Thesis.	In the field of the Modern Middle East, students may be required to write a thesis which must be submitted no later than April 1 of the year in which the degree is to be conferred. A thesis is not required in other fields in the Department of Near Eastern and Judaic Studies.	Dissertation and Defense.	The dissertation must demonstrate the candidate's thorough knowledge of the field and competence in independent research, and must constitute an original contribution to knowledge. Two copies of the dissertation, one of which must be the original typescript, are to be deposited in the office of the department chairman no later than April 1 of the year in which the candidate expects to earn the degree. The student must successfully defend the dissertation at a final oral examination.

### Doctor of Philosophy

Residence Requirements.	Three years of full-time residence will be required at the normal rate of seven semester-courses each academic year. Students who enter with graduate credit from other recognized institutions may apply for transfer credit. By rule of the Graduate School, a maximum of one year of credit may be accepted toward the residence requirement on the recommendation of the chairman of the department.	Language Requirements.	Candidates will be required to establish competence in Hebrew or Arabic as well as in two European languages, normally French and German. Additional languages may be required as necessary for research in each individual candidate's field.
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## Courses of Instruction

NEJS 101. <b>Introductory Literary Arabic</b>	A first course in literary Arabic covering the essentials of grammar, reading, pronunciation, translation and composition.  To be announced	NEJS 103b. <b>Advanced Literary Arabic</b>	A continuation of NEJS 103a.  Mr. Levy
NEJS 102a. <b>Intermediate Literary Arabic</b>	Study of advanced grammatical and syntactical forms. Reading in classical and modern texts. Drills in pronunciation and composition.  Prerequisite: NEJS 101 or its equivalent.	NEJS 104aR. <b>Islam: Civilization and Institutions</b>	Consideration of major issues in Islamic history. Examinations of the principle of Islamic theology and law; philosophy and political theory; social and political institutions. Appreciation of Islamic civilization and culture; relations with other cultures. Islam in modern times.  Messrs. Levy and Krek
NEJS 102b. <b>Intermediate Literary Arabic</b>	Mr. Levy	NEJS 104b. <b>Aramaic Dialectology</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 102b. <b>Intermediate Literary Arabic</b>	A continuation of NEJS 102a.  Mr. Krek	NEJS 106. <b>Elementary Ugaritic</b>	Grammar and poetic texts will be read with constant reference to biblical literature.  Mr. Young
NEJS 103a. <b>Advanced Literary Arabic</b>	This course is designed to help the student attain an advanced reading proficiency. The syllabus includes selections from classical and modern texts representing a variety of styles and genres.  Mr. Krek	NEJS 107b. <b>Temple, Myth and Ritual in Ancient Mesopotamia</b>	<input type="checkbox"/> Not offered 1984-1985

NEJS 108b. <b>Comparative Grammar of Semitic Languages</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 117a. <b>Job and the Problem of Evil</b>	An examination of the biblical texts (in translation) from diverse genres and periods which bear on the origin and meaning of evil, as well as on personal and national suffering. The centerpiece of the course will be the Book of Job. Consideration will be given to pertinent pre-biblical literary expressions on this theme. No specialized knowledge is required.
NEJS 109aR. <b>Genesis in Light of Archaeology</b>	The book of Genesis will be considered as a whole and selections will be analyzed in depth against the historical background that gave rise to the traditions. The creation of man, calculation of life spans, the deluge and Noah's ark, the patriarchal homeland, the promised land and its holy sites, the Egyptian link and the Damascus connection will be discussed.	Mr. Young	Mr. Fishbane
NEJS 110b. <b>Medieval Philosophy</b>	Topic for 1984: Theories of Knowledge. An examination of medieval theories of knowledge and their relationship to ideas concerning God, immortality and the nature of being. The medieval adaptations of originally Platonic and Aristotelian models will be discussed, through the writings of Augustine, Avicenna, Averroes, Cersonides and Thomas Aquinas. All readings in English.	Messrs. Ivy and Johnson	NEJS 118bR. <b>Book of Psalms</b>
NEJS 111b. <b>Genesis</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 119b. <b>The Minor Prophets: Nahum, Habakkak, Zephaniah</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 112a. <b>Biblical Hebrew</b>	A detailed investigation into the phonology, morphology, grammar and syntax of biblical Hebrew. Gesenius' <b>Hebrew Grammar</b> will be examined and supplemented. For advanced students.	NEJS 120b. <b>Intermediate Talmud</b>	A more intensive study of selected portions of Treatise Sanhedrin not dealt with in NEJS 53a. Greater emphasis will be placed on the understanding of the classical commentaries. Students will be expected to develop the ability to work through a section of the text on their own. The analysis will deal with the issue of voluntary and compulsory arbitration, and the binding nature of gambling agreements. Prerequisite: Hebrew 13.
NEJS 112b. <b>The Book of Isaiah</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 121b. <b>Aspects of the Apocalyptic Imagination</b>	Mr. Kimmelman
NEJS 113bR. <b>The Book of Exodus</b>	Selected readings (in Hebrew): A detailed study of the Book, its structure, text and exegesis, historical background and problems, its leading themes and ideas.	NEJS 123b. <b>Classical Biblical Commentaries</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 114a. <b>The Book of Amos</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 124b. <b>Introduction to Jewish Mysticism</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 115a. <b>Book of Deuteronomy</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 125b. <b>Midrashic Literature: Sifre Deuteronomy</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 116b. <b>The Problem of Evil in Jewish Philosophy</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 126b. <b>Agadic Literature: Avot DeRabbi Natan</b>	<input type="checkbox"/> Not offered 1984-1985
		NEJS 127aR. <b>Greek Jewish Literature</b>	Jewish poetry, drama, philosophy and historiography composed in Greek in late antiquity. The impact of Greek culture on the Jews and Judaism as shown in such works as Ezekiel the Tragedian's <b>Exodus</b> and Philo of Alexandria's <b>Creation of the World and Life of Moses</b> . The possibility of Greek influence on rabbinic thought.

Mr. Katchen

NEJS 127b. <b>The Jewish Liturgy</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 141a. <b>Jewish Historiography</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 128a. <b>Jews, Greeks and Romans</b>	Rulers, rabbis and rebels from the Maccabees to Mohammed; Talmudic Judaism and the background of Christianity. We examine the political conflicts and social and religious accommodations between the Jews and their conquerors in late antiquity.	NEJS 141b. <b>Jews, Catholics and Protestants in Western Europe, from the Reformation to the Present</b>	A study of the political, legal, social and economic status of Catholics, Protestants and Jews in early and modern Europe, with emphasis on the status of minorities and their struggle for equality in the transition from the medieval republica Christiana to the modern secular nation-state.
	Mr. Katchen		Mr. Ravid
NEJS 128b. <b>Jews and Romans</b>	<input type="checkbox"/> Not offered 1984-1985		
NEJS 130b. <b>The Philosophical and Religious Thought of Maimonides</b>	A comprehensive study of major aspects of the thought of Moses Maimonides, the greatest figure of the Jewish middle ages. Attention will be given to his contributions to Jewish law, as well as to his major philosophical and religious teachings.	NEJS 142bR. <b>Economic History of the Jews</b>	The economic history of the Jews in the Hellenistic world and the Dark Ages; commerce, moneylending and the Jewish problem; the economic activities of the Jews in medieval Europe; <i>raison d'état</i> , Mediterranean commerce, Italy and the readmission of the Jews to Holland, England and France; the road to emancipation.
	Mr. Fox		Mr. Ravid
NEJS 131a. <b>History of Jewish Philosophy: From the Bible to Maimonides</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 143b. <b>Faith and Reason in Islam</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 135a. <b>Neoplatonic Elements in Islamic and Jewish Philosophy</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 144b. <b>Nationalism in the Middle East</b>	<input type="checkbox"/> Not offered 1984-1985
NEJS 137a. <b>Three Major Themes in Modern Hebrew Literature</b>	Following a brief survey of the literature from the Hebrew Enlightenment to the Hebrew Renaissance, we will make an in-depth textual study of selected prose and poetry from the Hebrew Renaissance to today with special emphasis on the following selected themes: Biblical images and motifs, the Holocaust, and national redemption. Principal writers are Bialik, Shlonsky, Gilboa, Greenberg, Goldberg and Hazaz.	NEJS 147a. <b>History of the Middle East and the Ottoman Empire, 1450-1914</b>	<input type="checkbox"/> Not offered 1984-1985
	Mr. Brandwein		
NEJS 139b. <b>Modern Hebrew Literature</b>	This course will be a study of major examples of modern Hebrew literature from 1945 to the present. It will concentrate on both the short lyric poem and the short story in its variations. The following writers will be included: Amos Oz, David Shahar, Gershon Shafman and A.B. Yehoshua in prose; Yehudah Amichai, Dan Pagis and Dalia Ravikovich in poetry.	NEJS 147b. <b>The Arab-Israeli Conflict</b>	Consideration of Arab-Jewish relations, attitudes and interactions from 1880 to the present. Traces the evolution of the struggle for Palestine into a major regional conflict. Emphasis is on social factors and intellectual currents and their impact on politics. Examines the conflict within its international setting.
	Mr. Brandwein		Mr. Levy
NEJS 140a. <b>The Jews in Europe to 1492</b>	<input type="checkbox"/> Not offered 1984-1984	NEJS 149b. <b>Islamic Bibliography</b>	The purpose of this course is to familiarize the student with the history of oral and written communications in Islam and Middle East. Origins and development of printing is discussed. Special emphasis is placed on bibliographic literature in Western languages of Arabic, Turkish and Persian manuscripts and printed works. There are no prerequisites, although a workable knowledge of European languages and languages of the area is desirable.
	Mr. Brandwein		
NEJS 140b. <b>From Medieval to Modern: The Jews in Europe from 1492 to 1815</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 150bR. <b>The Great Powers and the Middle East Since 1798</b>	<input type="checkbox"/> Not offered 1984-1985
	Mr. Brandwein		Mr. Krek

NEJS 153b. <b>Sephardic Jewry, the Marranos, and the Inquisition</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 169aR. <b>The Destruction of European Jewry</b>	The function of anti-Semitism in the comparative history and politics of Nazism; the Holocaust organization and the victims' responses; allied policies and Western reactions; post-war punishment and reparations. Interdisciplinary approaches to historical sociology and legal philosophy will be applied.	
NEJS 156b. <b>Man and the Gods: Mythology and Magic of the Ancient Near East</b>	<input type="checkbox"/> Not offered 1984-1985		Mr. Jick	
NEJS 157aR. <b>A History of Israel, 1948-Present</b>	An analysis of Israel's domestic and foreign policies from 1948 to the present. Particular attention will be given to social and political trends in Israeli society, issues of war and peace, relations with Arabs and Palestinians and relations with the United States.	NEJS 173b. <b>Modern Jewish and Social Intellectual History Since 1870</b>	<input type="checkbox"/> Not offered 1984-1985	
	Mr. Reinhartz	NEJS 174b. <i>Pirkei Avot — The Sayings of the Fathers: In Its Historical Setting</i>	<input type="checkbox"/> Not offered 1984-1985	
NEJS 158bR. <b>Biblical Prophecy: Book of Jeremiah</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 175a. <b>History of Zionism</b>	The rise and development of the Zionist idea, Zionist parties, Zionist politics and Zionist diplomacy in relation to Jewish history and international affairs from 1830 to 1950. Zionism today.	
NEJS 160a. <b>The Emergence of the American Jewish Pattern, 1654-1967</b>	Survey of American Jewish history from the earliest settlement to the present. The emergence of the institutions, ideologies, life styles and cultural norms which constitute the American Jewish pattern.	NEJS 177a. <b>Agnon and His Contemporaries: Hebrew Literature in Translation</b>	Mr. Reinhartz	
	Mr. Jick		NEJS 177a. <b>Agnon and His Contemporaries: Hebrew Literature in Translation</b>	The course will examine the existence and struggle of the Jews in the Diaspora and Israel from World War I to the present, as reflected in modern Hebrew literature, particularly in the works of Agnon and his contemporaries. Special emphasis will also be given to parallel motifs in modern European literature.
NEJS 161a. <b>American Jewish Life</b>	<input type="checkbox"/> Not offered 1984-1985		Mr. Brandwein	
NEJS 163a. <b>The Sociology of the American Jew</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 182a. <b>Introduction to Jewish Bibliography</b>	The aim of the course is to acquaint students in the various fields of Judaic studies with the general bibliographic tools and the bibliographies in the major sub-fields. This course will concentrate on general Judaica/Hebraica bibliographies and on subject bibliographies in such fields as Jewish history, Jewish philosophy, Hebrew language and literature, anti-Semitism, Holocaust studies, etc.	
NEJS 164b. <b>The Sociology of the American Jewish Community</b>	<input type="checkbox"/> Not offered 1984-1985		Mr. Cutter	
NEJS 166a. <b>Modern Jewish History to 1880</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 182b. <b>Introduction to Jewish Bibliography</b>	See NEJS 182a.	
NEJS 166b. <b>Modern Jewish History 1880-1948</b>	<input type="checkbox"/> Not offered 1984-1985	NEJS 183a. <b>Contemporary Jewish Politics</b>	Mr. Cutter	
NEJS 168a. <b>Topics in East European Jewish History</b>	<input type="checkbox"/> Not offered 1984-1985		NEJS 183a. <b>Contemporary Jewish Politics</b>	This course will examine the development of Jewish politics in the contemporary era. It will focus on the continuing process of Jewish political interests, Jewish voting behavior, the role of Israel, patterns of Jewish political organization, Jewish political leadership and international Jewish political organization.
			Mr. Medding	

NEJS 187bR. Biblical Images, Motifs and Ideas in Modern Jewish Poetry	<input type="checkbox"/> Not offered 1984-1985	NEJS 230a. Seminar in Medieval Jewish Philosophy	<input type="checkbox"/> Not offered 1984-1985
NEJS 201a. The Syntax of Pre- Hellenistic Literary Hebrew	<input type="checkbox"/> Not offered 1984-1985	NEJS 230b. Seminar in Medieval Jewish Philosophy	<input type="checkbox"/> Not offered 1984-1985
NEJS 202. Ancient Syria	<input type="checkbox"/> Not offered 1984-1985	NEJS 231b. Seminar in Medieval Islamic Philosophy	<input type="checkbox"/> Not offered 1984-1985
NEJS 205a. Akkadian Texts Relating to Biblical Literature: Myths and Epics	<input type="checkbox"/> Close reading of selected texts. Emphasis on grammar, textual and literary form and meaning. Questions of the relevance of the material for Biblical studies will also be addressed.  Mr. Abusch	NEJS 232a. Seminar in Modern Jewish Philosophy	<input type="checkbox"/> Not offered 1984-1985
NEJS 205b. Akkadian Texts Relating to Biblical Literature: Religious Texts	<input type="checkbox"/> Close reading of selected texts. Emphasis on grammar, textual and literary form and meaning. Questions of the relevance of the material for Biblical studies will also be addressed.  Mr. Abusch	NEJS 233bR. Quest and Existence in the Works of Brenner, Gnessin, Agnon	<input type="checkbox"/> Not offered 1984-1985
NEJS 206. Seminar in Advanced Akkadian Literary Texts: Myths, Epics, Hymns	<input type="checkbox"/> Not offered 1984-1985	NEJS 234aR. Seminar in Late Medieval Jewish Philosophy	Mr. Ivry
NEJS 215b. Topics in American Jewish Communal Organization	<input type="checkbox"/> Not offered 1984-1985	NEJS 237a. Medieval Hebrew Poetry	<input type="checkbox"/> Not offered 1984-1985
NEJS 219b. Sumerian Historical Inscriptions	<input type="checkbox"/> Not offered 1984-1985	NEJS 238a. Major Trends in Modern Hebrew Literature	<input type="checkbox"/> A critical study of traditional and rebellious strains in the revival period of Hebrew literature. The course will be based on poetical dramas of Ramchal, <i>Kohelet Musar</i> of Mendelssohn, <i>Epic of Glory</i> of Y.L. Gordon. Special attention will be given to the Enlightenment and comparison between classicism, romanticism and realism as unfolded in the various literary creations.  Mr. Brandwein
NEJS 223b. Readings in the Dead Sea Scrolls	<input type="checkbox"/> Not offered 1984-1985	NEJS 244b. Seminar on Religion and Nationalism in the Middle East	<input type="checkbox"/> This seminar will deal with issues related to the role of religion in the processes of nation- and state-building and the formulation of national ideology. Each year a different topic will be selected for close examination.  Mr. Levy
NEJS 225b. North-West Semitic Inscriptions	<input type="checkbox"/> Not offered 1984-1985	NEJS 258b. Seminar on Modern Jewish History and Historiography	<input type="checkbox"/> Not offered 1984-1985
NEJS 227a. Seminar in Book of Chronicles	<input type="checkbox"/> Not offered 1984-1985	NEJS 259a and b. Topics on Zionism	<input type="checkbox"/> Not offered 1984-1985
		NEJS 260a. Seminar on the Philosophical Foundations of Jewish Ethics: Ancient and Medieval	<input type="checkbox"/> Not offered 1984-1985

NEJS 260b. <b>Seminar on the Philosophical Foundations of Jewish Ethics: Modern</b>	<input type="checkbox"/> Not offered 1984-1985	<b>CLORS 165aR. Introduction to the History and Civilization of the Ancient Near East</b>	Ms. Morrison
NEJS 266aR. <b>Topics in Biblical Religion</b>	Mr. Fishbane	<b>NEJS 317-340. Reading Courses</b>	Special tutorials for advanced graduate students.
NEJS 272a. <b>History of the Jews of Venice, I</b>	<input type="checkbox"/> Not offered 1984-1985	<b>317a and b. Readings in Assyriology</b>	Mr. Abusch
NEJS 272bR. <b>History of the Jews in Venice II</b>	Readings from various genres of Hebrew texts utilized in historical reconstruction, including chronicles, autobiography, letters, travelogues, communal records, responsa and other halakhic writings, and tombstones; also a class project of transcribing an unpublished Hebrew manuscript. Additionally, attention will be paid to acquiring fluency in reading modern Hebrew secondary literature.  Mr. Ravid	<b>318a and b. Readings in Medieval Jewish Philosophy</b>	Mr. Ivry
NEJS 287b. <b>Methods in Jewish Community Research</b>	See JCS 287b, Mr. Tobin	<b>319a and b. Readings in Judaeo-Arabic Literature</b>	Mr. Ivry
The following courses, offered in the Department of Classical and Oriental Studies, are of special interest to NEJS students studying in the fields of Ancient Near East, Semitics, and Biblical Studies. Please consult CLORS for descriptions.			
AKKADIAN 101. <b>Elementary Akkadian</b>	Ms. Morrison	<b>320a and b. Readings in Islamic Philosophy</b>	Mr. Ivry
AKKADIAN 103a. <b>Advanced Akkadian II: Second Millennium Texts</b>	<input type="checkbox"/> Not offered 1984-1985	<b>321a and b. Readings in Medieval Jewish Philosophy</b>	Mr. Fox
EGYPTIAN 101b. <b>Elementary Egyptian</b>	Mr. Zabkar	<b>322a and b. Readings in Modern Jewish Philosophy</b>	Mr. Fox
CLORS 100a and b. <b>Archaeology of the Ancient Near East and Aegean</b>	Mr. Todd	<b>323a and b. Readings in Jewish Thought</b>	Mr. Fox
CLORS 111. <b>Archaeology of Syria-Palestine</b>	<input type="checkbox"/> Not offered 1984-1985	<b>324a and b. Readings in Hebrew Literature</b>	Mr. Brandwein
CLORS 1+5bR. <b>From Alexander the Great to Cleopatra VII</b>	<input type="checkbox"/> Not offered 1984-1985	<b>325a and b. Readings in Biblical Texts</b>	Mr. Sarna
		<b>326a and b. Readings in Biblical Literature</b>	Mr. Fishbane
		<b>327a and b. Readings in Ancient Near Eastern Civilizations</b>	Mr. Young
		<b>328a and b. Readings in Ancient Near Eastern Languages</b>	Mr. Young
		<b>329a and b. Readings in the Sociology of the Jewish Community</b>	Mr. Sklare
		<b>331a and b. Readings in Yiddish Literature</b>	Mr. Szulkin
		<b>332a and b. Readings in American Jewish History</b>	Mr. Jick

333a and b. <b>Readings in the History of the Jews in Europe to 1800</b>	Mr. Ravid	339a and b. <b>Readings in Ottoman History and Civilization</b>	Mr. Levy
334a and b. <b>Readings in Modern Jewish History</b>	Mr. Reinhartz	340a and b. <b>Readings in Modern Middle Eastern History</b>	Mr. Levy
335a and b. <b>Readings in East European Jewish History</b>	Staff	NEJS 401-411. <b>Dissertation Colloquium</b>	Independent research for the Ph.D. degree. 401. Mr. Brandwein 407. Mr. Young 402. Mr. Fox 408. Mr. Jick 403. Mr. Ivry 409. Mr. Fishbane 404. Mr. Reinhartz 410. Mr. Ravid 405. Mr. Sarna 411. Mr. Levy 406. Mr. Sklare
337a and b. <b>Readings in Talmudic and Midrashic Literature</b>	Mr. Kimelman		
338a and b. <b>Readings in Second Commonwealth and Hellenistic Judaism</b>	Mr. Katchen		

# The Hornstein Program In Jewish Communal Service

## Objectives

The two-year program in Jewish Communal Service, leading to the Master of Arts degree, integrates Jewish studies and professional training, preparing students for positions in a variety of settings in the Jewish community, including federations, community centers, Hillel foundations, schools and other communal organizations.

A special one-year master's program is offered for students with graduate degrees in social work or Jewish studies. In addition, part-time study is permitted, but students must complete the program in no more than four years.

## Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Hornstein Program in Jewish Communal Service. In addition, applicants are expected to submit results of either the Graduate Record Examination or the Miller Analogies Test, a statement which describes the applicant's Jewish training and background and future plans, and a sample of written material. Applicants are expected to arrange for a personal interview.

## Faculty

Associate Professor  
**Bernard Reisman**,  
Director:  
American Jewish  
communal studies.

Professor  
**Marvin Fox**:  
Jewish philosophy.  
Rabbinic thought.  
Modern Jewish  
thought.

Professor  
**Marshall Sklare**:  
Sociology of the  
Jewish community.

Visiting Professor  
**Irving Bernstein**:  
Jewish communal  
service.

Associate Professor  
**Leon A. Jick**:  
American Jewish  
history.

Associate Professor  
**Reuven Kimelman**:  
Talmud and rabbinic  
literature.

Associate Professor  
**Gary A. Tobin**:  
Jewish community  
planning and  
research.

Visiting Associate  
Professor  
**Peter Medding**:  
Jewish political  
studies.

Assistant Professor  
**Jay Brodbar-**  
**Nemzer**:  
Contemporary Jewish  
family.

Assistant Professor  
**Jonathan S. Woocher**:  
Contemporary  
Judaism. Jewish  
identity.

Lecturer with rank of  
Assistant Professor  
**Lois G. Swack**:  
Field work. Jewish  
communal service.

Lecturer  
**Joshua Elkin**:  
Jewish education.

Lecturer  
**Daniel Margolis**:  
Jewish education

Lecturer  
**Bennett Solomon**:  
Jewish education.

Lecturer  
**Lawrence Sternberg**:  
Jewish community  
relations.

See the Department of  
Near Eastern and  
Judaic Studies and the  
Heller School catalog  
for other faculty and  
course offerings.

## Degree Requirements

### Master of Arts

Students in the Jewish Communal Service program may concentrate in one of the following three areas:

1. Group Work and Community Organization.
2. Management.
3. Jewish Education.

### Program of Study.

Students are expected to complete a minimum of 14 courses, including study in the following areas: professional studies, contemporary Jewish studies and classical Jewish studies. Students may take courses at other Boston area graduate schools (Boston University and Boston College).

During intersession between the first and second terms of the first year, first-year students are expected to participate in 1) the **Betty Starr Colloquium on National Jewish Communal Organizations**, a two-day field trip for first-year students to visit national offices and meet with the staffs of major Jewish communal organizations in New York

### Residence Requirement.

City, in order to examine their activities and roles in the American Jewish communal system; all students will participate in 2) the **Sumner N. Milender Seminar in Jewish Communal Leadership**, led by a prominent leader in Jewish communal service for several days of discussion and workshops on campus on aspects of Jewish communal leadership; and 3) **Management and Social Work Modules**, one week mini-courses dealing with specific practical skills and issues on an intensive basis. These are offered by the Management of Human Services Program of the Florence Heller School and other area schools of social work. All Jewish Communal Service concentrators are required to take one management module in the second year.

The residence requirement for this program is two years of full-time study or the equivalent in part-time study.

Language Requirement.	Fluency in Hebrew is required at a level comparable to two years of college training. Students not meeting this requirement upon entrance are required to enroll in courses in Hebrew language — <b>not for credit</b> .	Fieldwork/Internship.	Students have two fieldwork experiences in a Boston area-Jewish educational or communal service organization. In the first year, fieldwork: 15 hours a week; in the second year, 20 hours. This schedule requires students to be in residence through the end of May and to plan for a shorter winter intersession than indicated in the University's Academic Calendar.
Summer Study in Israel.	<b>The Joseph and Esther Foster Seminar in Israel on Contemporary Jewish Life</b> is sponsored in cooperation with the Center for Jewish Education in the Diaspora of the Hebrew University and is required of all students at the completion of their first year of study. The 4½-week program, held during May and June, is a combination of classes and field visits designed to provide an in-depth analysis of Israel. Costs for the Israel Seminar are partially subsidized by scholarships provided by the Joseph and Esther Foster Fund. Students are expected to pay the remainder of the cost.	Substantive Paper.	Students are required, during the second year, to submit a major substantive paper growing out of some phase of their fieldwork experience. The paper should analyze a practical issue in Jewish communal service in light of both the student's own experience and the relevant literature.

## Courses of Instruction

JCS 53bR. <b>Introduction to Talmud</b>	See NEJS 53bR. Mr. Kimelman	JCS 160a. <b>The Emergence of the American Jewish Pattern, 1654-1967</b>	See NEJS 160a. Mr. Jick
JCS 119bR. <b>Curriculum/Philosophy of Jewish Education</b>	To be announced	JCS 161a. <b>American Jewish Life and Institutions</b>	<input type="checkbox"/> Not offered 1984-1985
JCS 120b. <b>Intermediate Talmud</b>	See NEJS 120b. Mr. Kimelman	JCS 175a <b>History of Zionism</b>	See NEJS 175a. Mr. Reinharz
JCS 121a. <b>Jewish Education: An American Jewish Enterprise</b>	<input type="checkbox"/> Not offered 1984-1985	JCS 183a. <b>Contemporary Jewish Politics</b>	See. NEJS 183a. Mr. Medding
JCS 122b. <b>Content and Curriculum Choices for Teaching Siddur</b>	<input type="checkbox"/> Not offered 1984-1985	JCS 205a. <b>Theory and Practice of Jewish Communal Service</b>	An introduction to the field of Jewish communal service. This includes a history of Jewish communal services in this country, their relationship to Jewish traditions and to developments in the field of social welfare; the settings in which Jewish services are offered and the factors making for effective organizational performance. Mr. Reisman
JCS 127b. <b>The Jewish Liturgy</b>	<input type="checkbox"/> Not offered 1984-1985	JCS 205b. <b>Theory and Practice of Jewish Communal Service</b>	<input type="checkbox"/> Not offered 1984-1985
JCS 150aR. <b>The Jewish Contribution to German Literature</b>	See German 150aR. Mr. Zohn	JCS 206b. <b>Principles of Informal Education and Small Groups in Jewish Communal Service</b>	<input type="checkbox"/> Not offered 1984-1985
JCS 157aR. <b>A History of Israel, 1948-Present</b>	See NEJS 157aR. Mr. Reinharz		
JCS 159b. <b>Administration in Jewish Education</b>	Staff		

<b>JCS 207a. The History and Ideology of the Jewish Community</b>	<p>An examination of the principles and forms of Jewish communal organization from the Biblical period through the contemporary era. The course focuses on the ways in which the Jewish political tradition and its fundamental values have shaped communal structures, functions and leadership.</p>	<b>JCS 242b. The American Jewish Community and the Jewish Family</b>	<p>The Jewish family is considered an important institution in the continued viability of the American Jewish community. Current trends in the Jewish American family will be explored through the use of sociological data and concepts. The Jewish community's perception of problems in the family and communal responses and policies will also be examined.</p>
<b>Mr. Woocher</b>		<b>Mr. Brodbar-Nemzer</b>	
<b>JCS 208a. Contemporary Jewish Identity</b>	<p>An examination of the dynamics of Jewish identity: the changing historic and social forces which shape Jewish identity, resulting in a range of definitions of Jewishness in the contemporary era. Attention is addressed to the process by which current social institutions such as the family, Jewish education and Jewish communal programs seek to influence Jewish identity.</p>	<b>JCS 248c. Field Methods in Jewish Communal Service</b>	<p>Students are placed in selected Jewish communal organizations during the first year for two days a week of field practice. They receive individual supervision from an agency field supervisor, meet every other week with faculty for a group seminar and for periodic individual conferences.</p>
<b>Mr. Woocher</b>		<b>To be announced</b>	
<b>JCS 209a. Issues in Jewish Communal Leadership and Policy</b>	<input type="checkbox"/> Not offered 1984-1985	<b>JCS 249. Field Methods Seminar in Jewish Education</b>	<b>Ms. Shevitz</b>
<b>JCS 212aR. Methods and Skills in Jewish Communal Research and Evaluation</b>	<input type="checkbox"/>	<p>Not offered 1984-1985</p>	
<b>JCS 213b. The Jewish Tradition and Jewish Communal Service</b>	<p>An examination of the role which traditional Jewish values can play in shaping the perspective and work of the Jewish communal professional. The focus will be on how Jewish concepts—the sanctity of life, human dignity, community, <i>tzedakah</i>—can inform the ways in which communal workers think about and deal with critical issues affecting Jewish individuals, families and communities.</p>	<b>JCS 250. Field Methods in Jewish Communal Service and Jewish Education</b>	<p>Same as JCS 248c, except students are in field work for three days a week.</p>
<b>Mr. Woocher</b>		<b>Ms. Swack and Mr. Reisman</b>	
<b>JCS 215b. Topics in American Jewish Communal Organization</b>	<input type="checkbox"/> Not offered 1984-1985	<b>JCS 287b. Methods in Jewish Community Research</b>	<p>This seminar is designed to acquaint both researchers and pre-professionals in Jewish communal service with basic research techniques. Students will receive "hands-on" experience in conducting research by participating in projects currently sponsored by the Center for Modern Jewish Studies, or by developing their own projects based on scholarly interest or field placements. The course will include readings on issues pertaining to Jewish communal research and will focus on the relationship between research methods and planning applications in Jewish communal agencies.</p>
<b>Mr. Tobin</b>			
<b>JCS 220h. Introduction to Jewish Community Relations</b>	<p>An introduction to the field of Jewish community relations in the United States. This includes a history of relations between Jews and their host societies; a review of the development of modern defense organizations in the Jewish community; an analysis of the relations organizations and their constituencies; and an in-depth examination of the issues addressed and methods used by community relations agencies.</p>	<b>Seminar on Contemporary Jewish Issues</b>	<p>During the fall semester the seminar will meet every Wednesday from 11 a.m. to 1 p.m. During the spring semester, the seminar will meet alternate Wednesdays. <i>Non-credit</i>.</p>
<b>Mr. Sternberg</b>			
<b>JCS-SS 350. Foster Seminar in Israel on Contemporary Jewish Issues</b>		<b>JCS-SS 350. Foster Seminar in Israel on Contemporary Jewish Issues</b>	<p>Offered in cooperation with the Center for Jewish Education in the Diaspora at The Hebrew University.</p>

# Photobiology

See Photobiology

## Physics

### Objectives

The graduate program in physics is designed to equip students with a broad understanding of major fields of physics and to train them to carry out independent, original research. This objective is to be attained by formal course work and supervised research projects. As the number of students who are accepted is limited, a close contact between students and faculty is maintained, permitting close supervision and guidance of each student.

Advanced degrees will be granted upon evidence of the student's knowledge, understanding and proficiency in classical and modern physics. The satisfactory completion of advanced courses will constitute partial fulfillment of these requirements. Research upon which theses may be based, with residence at Brandeis, may be carried out in the following areas:

### Theoretical Physics:

Quantum theory of fields; elementary particle physics; general theory of relativity; quantum statistical mechanics; thermodynamics of irreversible processes; quantum theory of the solid state, critical phenomena and phase transitions.

### Experimental Physics:

High energy experimental physics; atomic and molecular physics; solid state physics; nuclear magnetic resonance; phase transition phenomena; liquid crystal physics; light scattering; positron physics; radio astronomy; biophysical structure analysis.

### Admission

As a rule, only candidates for the Ph.D. degree will be accepted. The general requirements for admission to the Graduate School apply to candidates for admission to the graduate area in physics. Admission to advanced courses in physics will be granted following a conference with the student at entrance.

### Faculty

Professor  
**Jack S. Goldstein**,  
Chair:  
Astrophysics.

Professor  
**Stephan Berko**:  
Positron interactions  
in solids. Positronium  
physics.

Professor  
**Donald L. D. Caspar**  
(Rosenstiel Basic  
Medical Sciences  
Research Center):  
Structural molecular  
biology. X-ray  
crystallography.

Professor  
**Stanley A. Deser**:  
Quantum theory of  
fields. Elementary  
particles.  
Supergravity.

Professor  
**Marcus T. Grisaru**:  
Quantum field theory.  
Elementary particles.  
Supergravity.

Professor  
**Eugene P. Gross**:  
Quantum theory of  
multiparticle systems.  
Quantum theory of  
solids. Kinetic theory.  
Plasma physics.

Professor  
**Peter Heller**:  
Solid state  
experimental physics.  
Phase transitions.  
Spin systems.

Professor  
**Lawrence E. Kirsch**  
(Director, Feldberg  
Computer Center):  
High energy  
experimental physics.

Professor  
**Hugh N. Pendleton**:  
Mathematical physics.  
Supergavity.

Professor  
**Alfred G. Redfield**  
(Rosenstiel Basic  
Medical Sciences  
Research Center):  
Magnetic resonance.  
Biophysics.

Professor  
**Howard J. Schnitzer**:  
Elementary particle  
theory. Quantum  
theory of fields.

Professor  
**Silvan S. Schweber**:  
Quantum theory of  
measurement. History  
of science.

Associate Professor  
**Laurence F. Abbott**:  
Elementary particle  
theory. Quantum  
theory of fields.

Associate Professor  
**James R. Beusinger**:  
Experimental high  
energy physics.

Associate Professor  
**Karl F. Canter**:  
Experimental low  
energy positron  
physics in atomic and  
many-body systems.

Associate Professor  
**Robert V. Lange**:  
Biophysics. Visual  
perception.

Associate Professor  
**Robert B. Meyer**:  
Liquid crystal physics.

Associate Professor  
**David H. Roberts**:  
Extragalactic  
astronomy.

Adjunct Associate  
Professor  
**Lawrence M.  
Schwartz**:  
Theoretical solid state  
physics. Electronic  
structure of  
disordered systems.

Associate Professor  
**John F. C. Wardle**:  
Radio astronomy.  
Cosmology.

Associate Professor  
**Hermann F.  
Wellenstein**:  
Experimental atomic  
physics. Electronic  
impact spectroscopy.

Assistant Professor  
**Takashi Odagaki**:  
Theoretical solid state  
physics.

Assistant Professor  
**Richard A. Poster**:  
Experimental  
elementary particle  
physics.

Assistant Professor  
**Leigh Sneddon**:  
Theoretical solid state  
physics.

**Degree Requirements****Master of Arts****Program of Study.**

The requirements for advanced degrees in the Department of Physics are as follows:

1. One year in residence as a full-time student.
2. Six semester courses of advanced work in physics. A thesis on an approved topic may be accepted in place of a semester course.
3. Satisfactory performance in the Qualifying Examination.

**Doctor of Philosophy**

1. Two years in residence as a full-time student.
2. Nine semester courses of advanced work in physics.
3. Outstanding performance on the qualifying examination.
4. Passing of an advanced examination in topics related to the student's thesis subject. This examination will normally be taken after preparatory studies in the prospective field of research.
5. Doctoral thesis and final oral examination.

**Program of Study and Course Requirements.**

Normally, first-year graduate students will elect from the 100 series; second-year students from the 200 series. To obtain credit toward residence for a graduate course taken at Brandeis, a student must achieve a final grade of "A" or "B" in that course. A student who obtains a grade lower than "B" or an "Incomplete" in two or more courses in any term will not be allowed to continue his or her studies beyond the end of that academic year. (A course from which students withdraw after midterm will be considered as "Incomplete.")

Students may obtain credit for advanced courses taken at another institution provided their level corresponds to the level of graduate courses at Brandeis and that an honor grade in these courses was obtained.

**Residence Requirements.**

A student may obtain up to one year's residence credit toward the Ph.D. requirements for graduate studies taken at another institution. No transfer residence credit will be allowed toward fulfillment of the master's requirements.

**Teaching.**

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

**Language Requirement.**

There is no foreign language requirement for either the master's or the doctoral degrees.

**Qualifying Examinations.**

In the first year, Quantum Mechanics (Physics 102) and Electromagnetic Theory (Physics 101) must be taken by all students unless they are exempted. All students, whether exempted or not, must take the final examinations in these courses (both fall and spring semesters), which also serve as the qualifying examination although the course itself is not required. An oral examination given at the end of the first year completes the qualification requirements.

**Course Requirements**

At least two graduate courses, with final examinations in the specialized courses listed below, must be taken during the first three semesters: (1) Statistical Physics, (2) Solid State Physics, (3) Biophysics, (4) Elementary Particles, (5) Astrophysics, (6) Experimental Physics (Physics 109), (7) General Relativity. Note, however, that not all of the above courses will necessarily be given each year.

One semester of Advanced Quantum Mechanics (Physics 202a) will be a required course for all students.

**Advanced Examinations.**

Advanced examinations will be in topics partitioned in the several areas of research interests of faculty. Faculty members working in each general area will function as a committee for this purpose and will provide information about their work through informal discussions and seminars. The advanced examination requirement consists of a written paper and an oral examination. While no original research by the student is expected, it is hoped that a proposal for a possible thesis topic will emerge. It is generally expected that the candidates will take the advanced examination in the field they wish to pursue for their Ph.D. theses, although there may be exceptions.

**Thesis Research.**

After passing the advanced examination, the student begins work with an adviser who guides his or her research program. The adviser should be a member of the Brandeis faculty but in special circumstances may be a physicist associated with another research institution. The graduate committee of the physics faculty will appoint a dissertation committee to supervise the student's research. The student's dissertation adviser will be the chair of the dissertation committee. The committee will recommend the student for admission to candidacy for the doctorate on recommendation of his or her adviser.

**Dissertation and Final Oral Examination.**

The doctoral dissertation must represent a piece of research of a standard acceptable to the faculty committee appointed for each Ph.D. candidate. The final oral examination, or defense, is an examination in which the student will be asked questions pertaining to the dissertation research.

## Courses of Instruction

Physics 101a. <b>Electromagnetic Theory I</b>	Electrostatics, magnetostatics, boundary value problems. Mr. Schnitzer	Physics 109a. <b>Advanced Laboratory I</b> Methods and techniques of experimental research. To be announced
Physics 101b. <b>Electromagnetic Theory II</b>	Maxwell's equations. Quasi-stationary phenomena. Radiation. Mr. Schnitzer	Physics 109b. <b>Advanced Laboratory II</b> Methods and techniques of experimental work. Mr. Canter
Physics 102a. <b>Quantum Mechanics I</b>	Nonrelativistic quantum theory and its application to simple systems: the harmonic oscillator, the hydrogen atom. Perturbation theory. Mr. Berko	Physics 110a. <b>Mathematical Physics</b> <input type="checkbox"/> Not offered 1984-1985
Physics 102b. <b>Quantum Mechanics II</b>	Systems of identical particles. Coupling of angular moments. Scattering theory. Time-dependent perturbation theory. Semi-classical analysis of interaction of atomic systems and electromagnetic waves. Mr. Berko	Physics 113a. <b>First Year Tutorial</b> A review of physics from the most elementary topics to those treated in other first-year graduate courses. The environment for an oral qualifying examination is reproduced in the tutorial. Mr. Sneddon
Physics 103a. <b>Statistical Physics</b>	Review of thermodynamics and probability theory. Statistical postulates and ensembles. Behavior of non-ideal gases. Correlation functions, fluctuation theorems, Wiener-Khintchine theorem; generalized Nyquist relations. Mean-field theories of phase transitions; effect of fluctuations. Mr. Redfield	Physics 113b. <b>Second Year Tutorial</b> A continuation of Physics 113a. Mr. Sneddon
Physics 104aR. <b>Solid State Physics</b>	The formal description of periodic systems. The vibrational and electronic properties of solids. Band structure and the Fermi surface. The transport and optical properties of solids. Mr. Odagaki	Physics 137a. <b>Science in the Second Half of the Nineteenth Century</b> <input type="checkbox"/> Not offered 1984-1985
Physics 107bR. <b>Particle Physics</b>	The phenomenology of elementary particles, strong, weak and electromagnetic interactions. Topics include properties of particles, kinematics and quantum mechanics of scattering and decay, phase space, quark model, unitarity symmetries and conservation laws. Mr. Bensinger	Physics 152bR. <b>Biological Assembly</b> See Biophysics 152bR. Mr. Caspar
Physics 108b. <b>Introduction to Astrophysics</b>	Topics in modern astrophysics. Optical, uv and x-ray spectroscopy of astrophysical plasmas; nuclear astrophysics; cosmology. Messrs. Goldstein, Roberts and Wardle	Physics 200aR. <b>General Relativity I</b> <input type="checkbox"/> Not offered 1984-1985
		Physics 200b. <b>General Relativity II</b> <input type="checkbox"/> Not offered 1984-1985
		Physics 202a. <b>Advanced Quantum Mechanics</b> Nonrelativistic field theory and relativistic quantum mechanics. Graphical version of time-dependent perturbation theory. Application of group theory to quantum mechanics. Mr. Gross
		Physics 202b. <b>Relativistic Quantum Field Theory</b> <input type="checkbox"/> Not offered 1984-1985

Physics 204a. <b>Topics in Condensed Matter Theory</b>	To be announced	Physics 303a and b. <b>Positron Physics Seminar</b>	Seminar covers latest developments in atomic, solid state and surface physics as studied using positron techniques. Will include student presentations and invited speakers.
Physics 204b. <b>Topics in Condensed Matter Theory</b>	Fermi-Thomas, Hartee and density functional theories of atoms, molecules, solids and surfaces. Field theory many body treatment of fermions, electron phonon interactions and superconductivity. Multiple scattering theory, coherent potentials and localization theory. Mean field and Landau-Ginsburg phenomenological approach to phase transitions. Functional methods and field theory approach to renormalization group. Position space and Monte Carlo renormalization groups. Time dependent critical phenomena.	Physics 304a. <b>Solid State Seminar I</b>	<input type="checkbox"/> Not offered 1984-1985
Physics 207a. <b>Plasma Physics</b>	<input type="checkbox"/> Not offered 1984-1985	Physics 305a and b. <b>Liquid Crystal Physics Seminar</b>	This seminar studies recent advances in the physics of liquid crystals and related systems such as microemulsions, colloidal suspensions, and polymer solutions.
Physics 208a. <b>Cosmology</b>	Mr. Gross A survey of modern cosmology. Major topics include: the Friedmann Big Bang models, physical processes in the early universe, baryon generation, inflation, fluctuations, galaxy formation, and the 3°K background radiation.	Mr. Meyer	
Physics 209a. <b>Laboratory Seminar I</b>	Mr. Abbott Analysis of some important recent experiments.	Physics 311a. <b>Advanced Topics in Mathematical Physics</b>	<input type="checkbox"/> Not offered 1984-1985
Physics 209b. <b>Laboratory Seminar II</b>	To be announced Analysis of some important recent experiments.	Research Courses	
Physics 210a and b. <b>Theoretical Seminar I, II</b>	To be announced Analysis of important recent developments in theoretical physics.	Physics 405. <b>Experimental Elementary Particle Physics</b>	Mr. Poster
Physics 213a and b. <b>Tutorial in Physics I, II</b>	Mr. Schnitzer Staff	Physics 406. <b>Experimental Elementary Particle Physics</b>	Mr. Bensinger
Physics 240b. <b>Seminar in Biophysical Research</b>	<input type="checkbox"/> Not offered 1984-1985	Physics 407. <b>Experimental Elementary Particle Physics</b>	Mr. Kirsch
Physics 301a and b. <b>Astrophysics Seminar</b>	Mr. Wardle Advanced topics and current research in astrophysics will be discussed.	Physics 408. <b>Theoretical Elementary Particle Physics</b>	Mr. Abbott
Physics 302a and b. <b>Elementary Particles Seminar</b>	Mr. Bensinger Seminar covers latest advances in elementary particle physics. Will include student presentations and invited speakers.	Physics 409. <b>Theoretical Elementary Particle Physics</b>	Mr. Deser
		Physics 410. <b>Theoretical Elementary Particle Physics</b>	Mr. Grisaru
		Physics 411. <b>Theoretical Elementary Particle Physics</b>	Mr. Pendleton

Physics 412. <b>Theoretical Elementary Particle Physics</b>	Mr. Schnitzer	Physics 424. <b>Mathematical Physics</b>	Mr. Pendleton
Physics 413. <b>Theoretical Elementary Particle Physics</b>	Mr. Schweber	Physics 425. <b>Statistical Physics</b>	Mr. Gross
Physics 414. <b>Experimental Solid State Physics</b>	Mr. Berko	Physics 426. <b>Astrophysics</b>	Mr. Goldstein
Physics 415. <b>Experimental Solid State Physics</b>	Mr. Canter	Physics 427. <b>Astrophysics</b>	Mr. Roberts
Physics 416. <b>Experimental Solid State Physics</b>	Mr. Heller	Physics 428. <b>Astrophysics</b>	Mr. Wardle
Physics 417. <b>Experimental Solid State Physics</b>	Mr. Sneddon	Physics 429. <b>Structural Biology</b>	Mr. Casper
Physics 418. <b>Experimental Solid State Physics</b>	Mr. Gross	Physics 432. <b>Experimental Atomic and Molecular Physics</b>	Mr. Wellenstein
Physics 419. <b>Experimental Solid State Physics</b>	Mr. Lange	Physics 436. <b>Biophysics</b>	Mr. Redfield
Physics 420. <b>Experimental Solid State Physics</b>	Mr. Odagaki	Physics 437. <b>Experimental Condensed Matter Physics</b>	Mr. Meyer
Physics 421. <b>Relativity</b>	Mr. Deser		
Physics 422. <b>Mathematical Physics</b>	Mr. Grisaru		
Physics 423. <b>Mathematical Physics</b>	Mr. Schweber		

# Politics

## Objectives

The graduate program in Politics, leading to the degree of Doctor of Philosophy, emphasizes comprehensive professional training by stressing both the fundamentals of the discipline grounded in the study of political thought and institutions and the requirements of method and analytical skills.

## Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Normally, the student's undergraduate training must be in a field of social sciences to be considered for admission to this program. Applicants are expected to take the Graduate Record Examination.

## Faculty

Professor  
**Robert J. Art**,  
Chair:  
International  
relations; American  
foreign policy.

Professor  
**Robert H. Binstock**:  
American politics.

Professor  
**Seyom Brown**:  
International relations;  
American foreign  
policy.

Professor  
**Donald Hindley**:  
Comparative politics;  
South East Asia; Latin  
American politics.

Professor  
**Mark Hulliung**:  
Political theory.

Professor  
**Robert O. Keohane**:  
International  
relations; Political  
economy.

Professor  
**Roy C. Macridis**:  
Comparative politics;  
Western Europe.

Professor  
**Ruth S. Morgenthau**:  
Comparative politics;  
Africa.

Professor  
**Peter Woll**:  
American politics;  
Administrative law.

Associate Professor  
**Jeffrey B. Abramson**:  
Political theory;  
Constitutional law.

Associate Professor  
**Martin A. Levin**:  
American politics;  
Urban politics.

Associate Professor  
**Ralph Thaxton**:  
Comparative politics;  
Peasants and  
revolution

Associate Professor  
**R. Shep Melnick**:  
American politics;  
Public law, and  
regulation.

Associate Professor  
**Susan M. Okin**:  
Political theory.

Assistant Professor  
**Steven Burg**:  
Comparative politics;  
U.S.S.R.; Eastern  
Europe.

Assistant Professor  
**Thomas Ilgen**:  
International  
relations; Political  
economy.

## Degree Requirements

### Master of Arts

No one will be accepted in the program who is not a doctoral candidate. However, the M.A. degree may be awarded upon satisfactory completion of one year of residence, the demonstration of proficiency in one foreign language, and the submission of an approved specimen of graduate-level scholarly writing to the department. In certain cases the department will counsel the student to complete his or her graduate studies program with a terminal M.A.

### Program of Study

The student must complete two years in residence and a minimum of twelve semester courses. Students with an M.A. in political science from other institutions may petition at the end of one year to have their previous graduate courses accepted for Brandeis credit; this may relieve them of as much as a year of residence requirement. (However, they must satisfy all Brandeis requirements: distribution of curriculum, language, etc.) For distribution, each graduate student will be required to take three of the following fields: American Government, Comparative Government, International Relations, Political Theory and/or Methods, or two of the above plus a category of study at the graduate level in another department of the University, as shall be judged valid for the student's program by this department. (See below for a further clarification of the fields of distribution.)

### Doctor of Philosophy

Students should note certain special features of the program, in particular, (a) instruction in small seminars under close faculty supervision, (b) supervised independent study facilities within the department, (c) supervised teaching assistantships, (d) opportunities for study in the consortium of universities in the Boston area, and (e) the opportunity to incorporate work in related and relevant fields, e.g., economics, anthropology, philosophy. Each student is assigned to a departmental adviser who will help plan a professional and pertinent program of study. A continuity of faculty direction is insured throughout the program with allowance for shifts in curricular interest.

Within each of the three fields chosen, graduate students will normally take at least two semester courses. The standard work load for full-time students is at least three courses in each semester of their first two years of study. Fourth courses and audits are encouraged, but the load is deliberately set so that the student may supplement his or her regular course work with independently motivated reading and scholarship. Reading courses will not be offered to first-semester students and will be generally discouraged during the first year. By the end of the first year, students should have identified their major and at least one of their minor fields of interest, and should make this known to their adviser and the Graduate Studies Chairman. (In the case of entering M.A.'s, a complete program should be worked out by the end of the first semester.)

Language Requirements.	By the end of the first year of study, the student is expected to demonstrate proficiency in one approved foreign language. (Quantitative methods may be offered in lieu of one of the foreign languages but <b>not</b> for purposes of obtaining the M.A. degree.) Proficiency in two foreign languages must be demonstrated prior to admission to Ph.D. candidacy. Language proficiency must be demonstrated at Brandeis and certified by the department. Foreign language courses may not be counted for academic credit.	Dissertation and Defense.	The dissertation will be completed under the supervision of the appropriate member of the departmental faculty. It must be sponsored by a departmental committee of at least two members and have the approval of the graduate committee of the department. It is assumed that the writing of the dissertation will take at least one year and, barring exceptional circumstances, not more than two and one-half years. The student must successfully defend the dissertation at a final oral examination conducted by his or her two departmental supervisors and another professor from outside the department or from another university.
Evaluation of First Year.	At the end of each student's first year in the graduate program, there will be a consultation between the student and at least two members of the department to evaluate the student's academic progress, and to help plan the student's subsequent work.	Teaching Assistantships.	As determined by funds and undergraduate enrollments, the department compensates students for teaching assistant work in an amount customarily based on need. First-year students do not normally receive teaching assistantships. It is the policy of the department that teaching experience is a normal and necessary part of the graduate training program and that ideally all students should have this opportunity regardless of compensation.
Research Paper.	Each second-year graduate student is required to submit a high-quality research paper, which must be approved in its final version by two members of the department (appointed by the graduate adviser in consultation with the student) before the student will be allowed to take the comprehensive Ph.D. qualifying examinations.	Fields and Sub-Fields.	As stated above, curricular distribution is based on four major fields. Within the broad range of American Government, special concentrations may be achieved in such areas as urban studies, public administration and policy, institutions of government, parties and pressure groups, constitutional law. The student specializing in Comparative Government should have command of the important theories and theoretical techniques, and cluster of institutions or processes, such as development, political economy, or parties and bureaucracies, as well as familiarity with a designated geographical area. In International Politics, the student also needs a broad mastery of the principal theories, together with a specialization in such topics as international subsystems, diplomatic history, security policy, political economy, comparative foreign policy, or American foreign policy, etc. In Theory and/or Methods, the student should be closely familiar with a major section of the history of political thought (ancient or modern) and the theories therein presented and developed, or may place primary emphasis on the so-called "scope methods of modern political science." This latter category implies not just the knowledge of quantitative techniques but an ability to criticize their application and a general grasp of the intellectual climate in which the philosophy of social science has developed.
Candidacy for the Ph.D.	A student may be admitted to candidacy for the Ph.D. degree upon completing the course and research paper requirements, passing the qualifying examination, fulfilling the language requirement and obtaining departmental approval of the subject and preliminary precis of the dissertation.		
	Normally at the end of the fourth semester or early in the fifth, a formal oral and written examination for candidacy for the Ph.D. will be given covering the student's three fields but with emphasis on the sub-fields in which the student has done the most work. Each of the examinations is individual: it responds to the approved program of the student. The written examinations may be taken, upon arrangement, within any four-month period. The orals are taken no later than two weeks after the last written examination. Students are examined orally in their three fields simultaneously.		
	However, each student must complete the Ph.D. qualifying examinations by the end of his/her fifth semester in the program, and must submit a dissertation prospectus by the end of the sixth semester. Any extension must be specifically granted by the Graduate Committee.		The possibility of particular concentrations and emphases within the four major fields above will, of course, vary with the course offerings and the supervisory capacities of the departmental faculty.

**Courses of Instruction****Courses and Seminars for Graduate Students**

Politics 203aR.

**Seminar:****Comparative Politics** Mr. Macridis & Ms. Morgenthau

Politics 204bR.

**Seminar:****International Politics**

Mr. Keohane

Politics 205a.  Not offered 1984-1985**Seminar: American Politics**Politics 206b.  Not offered 1984-1985**Seminar: Political Theory**Politics 119aR/219aR.   
**Policymaking in Urban Areas** Mr. LevinPolitics 140a/240a.   
**Politics of Africa** Approaches to African politics, from conquest to independence, from nationalist revolt to search for legitimacy. Country case studies include Nigeria, Ivory Coast, Tanzania and South Africa. Readings include issues in foreign policy.

Ms. Morgenthau

Politics 248b.  Not offered 1984-1985  
**Political Institutions**Politics 251b.  Not offered 1984-1985  
**Politics and Modernization: Issues in Autonomy and Dependency**Politics 254a.  Not offered 1984-1985  
**The Politics of Food Security**Politics 256b.  Not offered 1984-1985  
**European Political Systems**Politics 170b/270b.   
**Seminar: The Third World in the Global Economy** Prospects for Third World development within the global economy. The legacies of colonialism. Impact of the Bretton Woods system on the new states, and demands for a new international economic order. Contemporary concerns over energy, commodity price stabilization, trade preferences, technology transfer, debt and multinational enterprises.

Mr. Ilgen

**Politics 171b/271b. Multinational Enterprise and National Power**

The political implications of the growth of multinational enterprises, involving raw materials and manufacturing, often tying together trade and investment. Effects on national and international politics of the decline in economic power perceived by sovereign states.

Ms. Morgenthau

**Politics 179a/279a. The Politics of Food Security**

Course considers why growth does not necessarily assure an end to hunger and asks what policies promote adequate production and equitable distribution of food supplies. Readings focus on international as well as national attempts to secure access to food at acceptable prices. How food policy affects rise and fall of governments is examined in case studies.

Ms. Morgenthau

**Politics 97a/297a. Section 1. Judicial Activism: Causes and Consequences**

The changing determinants of war and conditions of peace in the nuclear era; the lessons of history; insights from the biological and social sciences about the causes and nature of human conflict; ethical implications of the new dimensions of war; prospective weapons — their political and military effects and prospects for their control. The principal instructor will be joined by colleagues from other departments.

Mr. Melnick

**Politics 97a/297a. Section 2. Science, Technology and Politics**

This course examines the domestic and international politics of constructing sound public policy to encourage advances in science and technology, and to manage the consequences of those advances. Issues of concern will include the peaceful use of nuclear power, the regulation of toxic chemicals and the development of recombinant DNA technology.

Mr. Ilgen

**Politics 97a/297a. Section 3. Comparative Political Ideologies**

An examination of selected political theories and theorists and the translation of theories into political movements. Emphasis will be placed on the latter with reference to liberal, Marxist and conservative parties in the 19th and 20th centuries. Students will be asked to make presentations dealing with aspects of such movements.

Mr. Macridis

**Politics 97b/297b. Section 3. Topics in Latin American Politics**

Mr. Hindley

Politics 97b/297b, Section 4. <b>Seminar in Third World Politics</b>	Advanced readings in politics and society of non-western countries. Emphasis on state development and popular responses to the growth of the state. Case studies to be drawn from Asian, African, Middle Eastern and Latin American context.	In addition, the following advanced undergraduate courses may be taken for graduate credit.
	Mr. Thaxton	
Politics 301-319a. <b>Readings in Politics</b>	301a. Mr. Binstock 302a and b. Mr. Brown 303a and b. Mr. Hindley 305a and b. Mr. Macridis 306a and b. Ms. Morgenthau 307a and b. Mr. Melnick 308a and b. Mr. Woll 309a and b. Mr. Art	310a. Mr. Hulliung 311a and b. Mr. Levin 312a and b. Mr. Keohane 313a and b. Mr. Abramson 314a and b. Mr. Burg 316a and b. Mr. Ilgen 318a and b. Ms. Okin 319a and b. Mr. Thaxton
Politics 400-414. <b>Dissertation Research</b>	Independent research for the Ph.D. degree 400. Mr. Abramson 401. Mr. Binstock 402. Mr. Brown 403. Mr. Hindley 405. Mr. Macridis 406. Ms. Morgenthau 408. Mr. Woll	409. Mr. Art 410. Mr. Hulliung 411. Mr. Levin 412. Mr. Keohane 413. Ms. Okin 414. Mr. Thaxton
		Politics 111a. <b>The American Congress</b> Mr. Woll
		Politics 112b. <b>American National Institutions</b> Mr. Melnick
		Politics 115a. <b>History of American Constitutional Law</b> Mr. Abramson
		Politics 115b. <b>American Constitu- tional Law Theory: Seminar</b> Mr. Woll
		Politics 117a. <b>Administrative Law</b> Mr. Woll
		Politics 123bR. <b>Politics of Urban Criminal Justice</b> Mr. Levin
		Politics 124b. <b>Politics of Regulation</b> Mr. Melnick
		Politics 125a. <b>Political Change in Afro-American Communities</b> Mr. Pouncey
		Politics 126a. <b>Race and Ethnicity in American Politics</b> Mr. Pouncey
		Politics 128aR. <b>Contemporary Pea- sant Revolutions</b> Mr. Thaxton
		Politics 134bR. <b>The Arab-Israeli Conflict</b> Mr. Levy
		Politics 139a. <b>Africa and World Politics</b> Mr. Nyangoni
		Politics 141aR. <b>National and International Politics of Southern Africa</b> Ms. Morgenthau
		Politics 142aR. <b>Comparative Politics of North Africa</b> Mr. Nyangoni

Politics 143b. <b>Third World Countries and Soviet Strategy</b>	Mr. Pouncey	Politics 174bR. <b>Seminar: Problems of National Security</b> Mr. Art
Politics 144a. <b>Political Change in Latin America I</b>	Mr. Hindley	Politics 178b. <b>The Political Economy of International Trade</b> Messrs. Keohane and Petri
Politics 147a. <b>Government and Politics of China</b>	Mr. Thaxton	Politics 183bR. <b>Community and Alienation: Social Theory from Marx to Freud</b> Mr. Hulliung
Politics 150a. <b>Government and Politics of Southeast Asia</b>	Mr. Hindley	Politics 184aR. <b>Utopia and Power in Modern Political Theory</b> Mr. Hulliung
Politics 162a. <b>Evolution of the International System, 1815-1945</b>	Mr. Schuker	Politics 187b. <b>Justice and International Relations</b> Ms. Okin and Mr. Brown
Politics 165b. <b>Introduction to Peace Studies</b>	Messrs. Brown and Fischer	Politics 194a. <b>Politics and the Novel</b> Mr. Levin
Politics 166b. <b>Issues in International Political Economy</b>	Mr. Ilgen	Politics 196bR. <b>Romantic and Existentialist Political Thought</b> Mr. Hulliung
Politics 167bR. <b>International Law and Conflict Resolution</b>	Ms. Ben-Naftali	Politics 198a. <b>Feminist Theory: Gender, Power and Justice</b> Ms. Okin
Politics 168b. <b>American Foreign Policy</b>	Mr. Art	
Politics 173aR. <b>China in World Politics</b>	Mr. Thaxton	

# Psychology

Objectives	<p>The graduate program in Psychology leads to the degree of Doctor of Philosophy. The goal of the program is to develop competent research psychologists and teachers who will become contributors to knowledge in psychology. Toward this end, an emphasis is placed on research activity, starting in the first semester of graduate study. The program of study reflects a belief that the student should develop an area of research specialization and also should be exposed to a range of topics in general psychology. Dissertation supervision is available in the following areas: Sensation, Perception, Memory, Learning, Thinking, Comparative, Developmental, Personality, Psychopathology, Social Psychology, Linguistics and Cognitive Science.</p>	Admission	<p>The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.</p>
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## Faculty

<p>Professor  <b>Arthur Wingfield</b>,  Chair:  Human memory.  Cognitive processes.</p>	<p>Professor  <b>James R. Lackner</b>,  Director, Spatial  Orientation  Laboratory:  Human experimental  psychology.  Psycholinguistics</p>	<p>Professor  <b>Ricardo B. Morant</b>,  Director, Experimen-  tal/Physiological:  Experimental psy-  chology. Perceptual  mechanism. Sensation  and perception.</p>	<p>Associate Professor  <b>Theresa M. Amabile</b>:  Social psychology.  Creativity.</p>	<p>Associate Professor  <b>Alan S. Prince</b>:  Phonological theory.  Metrics.</p>	<p>Assistant Professor  <b>Joseph Cunningham</b>:  Developmental  psychopathology.</p>
<p>Professor  <b>Ray S. Jackendoff</b>,  Chair, Program in  Linguistics and Cog-  nitive Science;  Linguistics. Semantic  theory. Music.</p>	<p>Professor  <b>Leslie Z. McArthur</b>,  Director, Social/De-  velopmental Social  psychology. Interper-  sonal attraction.</p>	<p>Professor  <b>Zick Rubin</b>:  Social psychology.  Interpersonal  relationships.</p>	<p>Associate Professor  <b>Raymond Knight</b>:  Clinical psychology.  Experimental  psychopathology.</p>	<p>Associate Professor  <b>Jerome Wodinsky</b>:  Comparative psychol-  ogy. Learning theory.  Sensory physiology.</p>	<p>Assistant Professor  <b>Jane B. Grimshaw</b>:  Linguistics. Language  acquisition.</p>
<p>Adjunct Professor  <b>Ashton Graybiel</b></p>	<p>Visiting Professor  <b>Edgar Zufit</b>:  Neurolinguistics.  Psycholinguistics.</p>	<p>Associate Professor  <b>Joan Maling</b>:  Linguistics. Syntactic  theory. Historical syn-  tax. Metrics.</p>	<p>Associate Professor  <b>Michael Berbaum</b>:  Group problem-  solving and  decision-making.</p>	<p>Assistant Professor  <b>Marjorie Lachman</b>:  Life-span develop-  ment. Adult  personality.</p>	<p>Assistant Professor  <b>James Todd</b>:  Layout and motion  perception.</p>

## Degree Requirements

### Doctor of Philosophy

Program of Study.	<p>Although there is a two-year minimum residency requirement, four years of full-time graduate study are usually required for the Ph.D. The student is expected to carry the equivalent of twelve credit units per semester during residency.</p>	Course Requirements.	<p>Entering students will take two advanced courses and Psychology 210a in the first term of residence, one advanced course and Psychology 210b in the second term. After that they shall take two advanced courses per term in the second year, and one each term thereafter until admitted to candidacy for the doctorate. Each term, a student must take at least one graduate level course or seminar (100-level or above) that is not an Independent Readings or Research course. Only selected 100-level courses, determined by the Psychology Department, will count as advanced, graduate level courses. Graduate level course selection will not be restricted to the Psychology Department but will be arranged by the student in consultation with the faculty adviser.</p>
Research.	<p>Each student will devote one-quarter of his or her time to research the first semester of the entering year. For all subsequent semesters, students shall devote a minimum of one-half time to research.</p>		
Research Reports.	<p>Students will submit reports on their research for the preceding year, in journal form, in time to permit evaluation of the first project by the end of the third semester, and of the second project by the end of the fifth semester. Satisfactory completion of the research projects is required for continuation in the program. Stu-</p>		

**Qualifying Examinations.**

Before being admitted to candidacy for the doctorate, each student must also pass a qualifying examination. During the student's third year, he or she will be examined in the historical, theoretical and empirical literature related to the student's area of specialization, broadly conceived. The chairman of the department, in consultation with the student and adviser, will appoint a three-member committee to administer the qualifying examination. The examination may be in either oral or written form. A student may petition the department to take the examination a second time if necessary.

**Breadth Requirement.**

All graduate students must demonstrate breadth in the field of psychology before being admitted to candidacy for the Ph.D. This breadth requirement may be fulfilled by demonstrating competence in at least six of the nine areas listed below. The requirements may be satisfied in any of three ways:

- a. By having completed an undergraduate course in that area,
- b. By completing an undergraduate or graduate course offered in that area at Brandeis,
- c. By successfully passing the equivalent of any undergraduate final examination for that course.
- d. Of the six courses, a minimum of two should be taken from areas in Group A and a minimum of two from Group B.

**Group A**

1. Physiological/Sensory Processes
2. Perception
3. Learning/Comparative
4. Cognition/Memory
5. Cognitive Science/Linguistics

**Group B**

1. Developmental
2. Social
3. Personality
4. Abnormal

**Teaching Assistantship Requirements.**

Each student must work as a teaching assistant for a minimum of four courses, including the course Introductory Psychology, and at least one of the following courses: Statistics, Experimental, Developmental, Cognitive Processes, Sensory Processes, Perception, Social, Personality or Abnormal.

**Language Requirement.**

There is no foreign language requirement.

**Admission to Candidacy.**

A student may be admitted to candidacy for the doctorate upon fulfilling the above requirements.

**Dissertation and Defense.**

Following the completion of all examinations, the student will prepare a prospectus of the proposed dissertation study in consultation with a faculty dissertation sponsor. The prospectus may be based on preliminary research conducted prior to the student's admission to candidacy for the doctorate. Upon approval by the faculty of the department, a dissertation committee of three or more members will be appointed by the department chair, including the dissertation sponsor as chair of the com-

mittee. The dissertation sponsor will be responsible for advising the student throughout the performance of his or her work, in consultation with the remaining members of the committee at appropriate times in the course of the work. From time to time, the committee will report the student's progress to the department faculty.

The dissertation should provide evidence of originality, scholarship and research ability. It should be a contribution to knowledge, ordinarily an experimental investigation, but not necessarily so. Upon submission to the chair of the department of a copy of the dissertation, signed by all members of the dissertation committee and one member from outside of the university, and a successful defense of the dissertation before all members of the department, the award of the Ph.D. will be recommended to the Faculty Council of the Graduate School.

**Master of Arts for Special Cases**

Students in the Ph.D. program may petition for a Master of Arts degree upon completion of the following requirements: 1) One year minimum residency; 2) Acceptable master's thesis. (An acceptable first-year research report will count as a master's thesis.) 3) Completed breadth requirements.

**Ph.D. in Psychology, with Specialization in Linguistics and Cognitive Science.**

This program focuses on the development of formal theories of mental representation. It emphasizes the unity behind approaches to mind within cognitive psychology and linguistics, with attention to the important contributions of computer science and philosophy. Application should specifically mention an interest in this program.

The degree requirements are as given above, except in the following respects:

**Course Requirements.**

Entering students shall take Psychology 208a in the first or second year of residence; fourth semester students shall take Psychology 216b, in which they present their research. Selection of other courses will be arranged by the student in consultation with the faculty adviser.

**Breadth Requirements.**

The areas in which a student must demonstrate competence are:

1. Two out of three
  - a. Syntax
  - b. Semantics
  - c. Phonology
2. Two out of three
  - a. Perception
  - b. Cognition
  - c. Cognitive Development
3. One out of three
  - a. Psycholinguistics
  - b. Language Acquisition
  - c. Neuropsychology
4. One out of three
  - a. Logic
  - b. Philosophy of Mind/Language
  - c. Computer Science

**Courses of Instruction**

Psychology 123a.  Not offered 1984-1985  
**Psychology of  
Pictorial  
Representation**

Psychology 130bR.  Not offered 1984-1985  
**Life-span  
Development:  
Adulthood and Old  
Age**

Psychology 132a.  Not offered 1984-1985  
**Cognitive  
Development**

Psychology 135bR.  Not offered 1984-1985  
**Seminar in Social  
Cognition**

Psychology 136aR.  Not offered 1984-1985  
**Advanced Topics in  
Developmental  
Psychology**

Psychology 138a.  
**Social Relationships**  
 An examination of social relationships, including parent-child relationships, friendship, marriage and work relationships, viewed in the context of psychology, social structure and culture. Attention will be given to research strategies for studying social relationships, and students will be encouraged to conduct their own research. Enrollment limited to 15.

Mr. Rubin

Psychology 139bR.  Not offered 1984-1985  
**Development of  
Play and  
Imagination**

Psychology 140b.  
**Social Psychology  
and Social Policy**  
 Not offered 1984-1985

Psychology 145b.  
**Aging in a Changing  
World**  
 Psychological problems related to the aging process are examined in a multidisciplinary perspective. Social, biological, political, economic and historical-cultural factors that effect and are affected by psychological aging are considered.

Ms. Lachman

Psychology 151aR.  
**Seminar in Mental  
Representation**  
 Not offered 1984-1985

Psychology 153a.  
**Consciousness**

This course will explore the nature of conscious awareness and its relation to the mind and body. After going through the philosophical history of the mind-body problem, we will discuss the role of consciousness in psychological theory from William James, through the behaviorist movement, to contemporary cognitive science. The course will dissect the differences between being conscious and being intelligent, being self-conscious, and being able to use a language. Case studies to illuminate the discussion will be drawn from speculations regarding human infants, animals, computers and exotica such as split-brain patients and multiple personalities.

Messrs. Jackendoff and Morant

Psychology 154aR.  
**Human Memory**

This course presents a systematic analysis of current and traditional memory research and theory as it sheds light on both normal memory and cognitive function and on memory deficits following cerebral damage.

Mr. Wingfield

Psychology 155aR.  
**Visual Space  
Perception**

Not offered 1984-1985

Psychology 156bR.  
**Perceptual  
Development**

Psychology 160b.  
**Seminar on Sex  
Differences**

Not offered 1984-1985

Psychology 161a.  
**Clinical Psychology  
Practicum**

This course, in conjunction with Psych. 161b, provides an intensive, supervised practicum experience in the provision of mental health services. Students pursue a program of reading and spend one day a week working in a clinical facility. Weekly class meetings are structured to provide opportunities for personal and professional growth through discussion of individual experiences in the clinical setting. Enrollment limited to 20.

Mr. Cunningham

Psychology 161b.  
**Clinical Psychology  
Practicum**

A continuation of Psych. 161a. Enrollment limited to 20.

Mr. Cunningham

Psychology 162a.  
**Psychosomatics**

Not offered 1984-1985

Psychology 165b.  
**Culture and  
Cognition**

Not offered 1984-1985

Psychology 167b. <b>Schools of Psychotherapy</b>	Theories and techniques of several schools of psychotherapy and behavior modification are considered. The theories of personality, methods of intervention, goals of therapy and relevant research will be emphasized.	Mr. Knight	Psychology 197a. <b>Language Acquisition and Development</b>	When a child knows a language he or she has successfully constructed a grammar of it: in the course of constructing the grammar the child must form hypotheses about the language and test them against the data. The central problem of language acquisition is to explain what makes this formidable task possible. In the course, we will study and evaluate theories of language acquisition in this light, basing our conclusions on recent research in the development of syntax, semantics and phonology. The overall goal is to arrive at the coherent picture of the kinds of hypotheses children make, and the kinds of strategies they use as they progress toward mastery over their language.
Psychology 168a. <b>The Psychology of Creativity</b>	The purpose of this course will be 1) to explore the foundation of modern theory and research on creativity, and 2) to examine methods of stimulating creative thought and expression. The course material will include 1) psychodynamic, behavioristic, humanistic and social-psychological theories of creativity, 2) personality studies of creative individuals, 3) studies of creative environments, 4) methods of defining and assessing creativity, and 5) programs designed to increase both verbal and non-verbal creativity. Enrollment limited to 20.	Ms. Amabile	Ms. Grimshaw	
Psychology 171a. <b>Biological Bases of Motivation</b>	<input type="checkbox"/> Not offered 1984-1985		Psychology 198b. <b>The Language of Thought</b>	<input type="checkbox"/> Not offered 1984-1985
Psychology 172aR. <b>Temporal Patterning of Behavior</b>	<input type="checkbox"/> Not offered 1984-1985		Psychology 199a. <b>Introduction to Neuropsychology</b>	This course is designed as an introduction to the field of neuropsychology. Topics will include the concepts of cerebral dominance and localization of function within the human brain, with special reference to language and related mental function. The aphasic syndromes will receive special attention, including their symptoms, progress, brain localization and concomitant cognitive disorders.
Psychology 173aR. <b>Psycholinguistics</b>	An introduction to modern psycholinguistics with an emphasis on language comprehension and production. Questions concerning species-specificity and the neurological organization of language are included for consideration.	Mr. Zurif		Messrs. Wingfield and Zurif
Psychology 177a. <b>Biological Basis of Behavior</b>	<input type="checkbox"/> Not offered 1984-1985		Psychology 201a and b. <b>Research Topics in Experimental Psychology</b>	Staff
Psychology 180b. <b>Seminar: Writing and the Social Sciences</b>	<input type="checkbox"/> Not offered 1984-1985		Psychology 204a. <b>Research Methodology for Developmental and Social Psychology</b>	Ms. Amabile, Mr. Berbaum, Mr. Cunningham, Ms. Lachman, Ms. McArthur, Mr. Rubin
Psychology 193bR. <b>Tests and Measurements</b>	<input type="checkbox"/> Not offered 1984-1985		Psychology 205a. <b>Seminar in Perceptual Development</b>	<input type="checkbox"/> Not offered 1984-1985
Psychology 194b. <b>Language and Mind</b>	<input type="checkbox"/> Not offered 1984-1985		Psychology 206b. <b>Computer Methods in Psychological Experimentation</b>	<input type="checkbox"/> Not offered 1984-1985
Psychology 195a. <b>Psychological Theory</b>	A survey of psychological theories including Associationism, Structuralism, Functionalism, Gestalt, Behaviorism, Psychoanalysis, and their modern derivatives. Emphasis is on the nature of explanation and the methods by which it is achieved	Mr. Hershenson	Psychology 207a. <b>Seminar in Perception</b>	<input type="checkbox"/> Not offered 1984-1985

Psychology 208a. <b>Proseminar: Issues in Cognitive Science</b>	Required of all incoming students in cognitive science, this seminar will discuss philosophical, empirical and methodological issues confronting science. Readings will be drawn from the literature in vision, linguistics, computer science and philosophy.	224a and b. <b>Research in Speech Perception and Cognitive Processes</b> Mr. Wingfield
	Mr. Jackendoff	225a and b. <b>Research in Visual Information Processing</b> Mr. Hershenson
Psychology 209a. <b>Advanced Seminar in Measurement Theory and Mathematical Modelling</b>	Systematic approaches to the measurement and modelling of psychological phenomena. Case studies from several domains are used to illustrate the application of various formal and mathematical tools in psychological research.	226a and b. <b>Research in Cognitive Processes and Psychopathology</b> Mr. Knight
	Messrs. Berbaum and Todd	227a and b. <b>Research in Neurolinguistics and Psycholinguistics</b> Mr. Zurif
Psychology 210a. <b>Advanced Psychological Statistics I</b>	Probability and inferential statistics for experimental research. Rules of probability, random variables and their distributions, statistical inference, tests of hypotheses and confidence intervals for population means, principles of experimental design, the analysis of variance. Introduction to computer analysis using the SPSS and BMDP statistical packages	228a and b. <b>Research in Syntax and Comparative Germanic</b> Ms. Maling
	Mr. Berbaum	229a and b. <b>Research in Person Perception</b> Ms. McArthur
Psychology 210b. <b>Advanced Psychological Statistics II</b>	Statistical procedures for quasi and non-experimental research. Correlation and regression, multiple regression, partial and multiple correlation, the analysis of contingency tables (cross-tabulations), nonparametric statistics. Computer data analysis using SPSS and BMDP. <i>Prerequisite:</i> Psychology 210a or permission of the instructor.	230a and b. <b>Research in Animal Behavior</b> Mr. Wodinsky
	Mr. Berbaum	231a and b. <b>Research in Social Psychology</b> Ms. Amabile
Psychology 213b. <b>Cognition and the Brain</b>	□ Not offered 1984-1985	232a and b. <b>Research in Developmental Psychopathology</b> Mr. Cunningham
Psychology 216b. <b>Research Seminar in Cognitive Sciences</b>	In this seminar, students will present and discuss their ongoing research.	233a and b. <b>Research in Syntax and Language Learnability</b> Mr. Grimshaw
Psychology 220-238. <b>Courses in Research</b>	Ms. Maling and Mr. Zurif	234a and b. <b>Research in Life-span Development; Adult Personality</b> Ms. Lachman
220a and b. <b>Research in Spatial Orientation</b>	Mr. Lackner	235a and b. <b>Research in Layout and Motion Perception</b> Mr. Todd
221a and b. <b>Research in Semantics and Conceptual Structure</b>	Mr. Jackendoff	236a and b. <b>Research in Developmental Psychology</b> Mr. Watson
222a and b. <b>Research in Human Spatial Orientation</b>	Mr. Morant	237a and b. <b>Research in Group Problem Solving and Decision-Making</b> Mr. Berbaum
223a and b. <b>Research in Social Psychology</b>	Mr. Rubin	238a and b. <b>Research in Metric and Phonological Theory</b> Mr. Prince

<b>Psychology 250-268. Advanced Research Project</b>	250a and b. Mr. Lackner	260a and b. Ms. Maling	<b>Psychology 300a. Issues in Social and Developmental Psychology</b>	<input type="checkbox"/> Not offered	1984-1985
	251a and b. Mr. Morant	261a and b. Ms. Amabile			
	252a and b. Mr. Rubin	262a and b. Mr. Berbaum		<input type="checkbox"/> Not offered	1984-1985
	253a and b. Mr. Wingfield	263a and b. Mr. Cunningham			
	254a and b. Mr. Hershenson	264a and b. Ms. Grimshaw			
	255a and b. Mr. Knight	265a and b. Ms. Lachman	<b>Psychology 310b. Topics in Data Analysis for Social Scientists</b>	400. Mr. Lackner	410. Mr. Wodinsky
	256a and b. Ms. McArthur	266a and b. Mr. Todd		401. Mr. Jackendoff	411. Ms. Amabile
	257a and b. Mr. Wodinsky	267a and b. Mr. Zurif		402. Mr. Morant	412. Mr. Cunningham
	258a and b. Mr. Watson	268a and b. Mr. Prince		403. Mr. Rubin	413. Ms. Grimshaw
	259a and b. Mr. Jackendoff			404. Mr. Wingfield	414. Ms. Lachman
<b>Psychology 280-298. Advanced Readings</b>	280a and b. Mr. Lackner	290a and b. Ms. Maling	<b>Psychology 400-418. Dissertation Research</b>	405. Mr. Hershenson	415. Mr. Todd
	281a and b. Mr. Morant	291a and b. Ms. Amabile		406. Mr. Knight	416. Mr. Berbaum
	282a and b. Mr. Rubin	292a and b. Mr. Berbaum		407. Mr. Watson	417. Mr. Zurif
	283a and b. Mr. Wingfield	293a and b. Mr. Cunningham		408. Ms. Maling	418. Mr. Prince
	284a and b. Mr. Hershenson	294a and b. Ms. Grimshaw		409. Ms. McArthur	
	285a and b. Mr. Knight	295a and b. Ms. Lachman	<b>Linguistics 100a. Introduction to Linguistics</b>	In addition, the following advanced undergraduate courses may be taken for graduate credit.	
	286a and b. Ms. McArthur	296a and b. Mr. Todd		A general introduction to linguistic theory and the principles of linguistic analysis. The central topic of the course is what speakers know about their language: syntax, semantics, and phonetics and phonology. In each area, students will construct detailed analyses of data from English and from other foreign languages, and examine their implications for a theory of languages. Additional topics such as historical linguistics and the psychological implications of linguistic theory will be covered as time allows.	
	287a and b. Mr. Wodinsky	297a and b. Mr. Zurif		Ms. Maling	
	288a and b. Mr. Watson	298a and b. Mr. Prince		Linguistics 100aR. Introduction to Linguistics	
	289a and b. Mr. Jackendoff			See Linguistics 100a. Mr. Prince	

Linguistics 110a. <b>Introduction to Phonology</b>	This course is an introduction to Generative Phonology, which is a theory of natural language sound systems. It begins with a review of articulatory phonetics, followed by distinctive feature theory and the concept of a "natural class." The central section covers morphology and the nature of morphophonetics and universal properties of the rules that relate morphophonemic and phonetic representations. The course ends with discussion of a special topic such as syllable structure or word-formation. Prerequisite: Linguistics 100a.	Linguistics 135aR. <b>Linguistics and the Romance Languages</b>	<input type="checkbox"/> Not offered 1984-1985
	Mr. Prince		
Linguistics 112b. <b>Introduction to Historical Linguistics</b>	<input type="checkbox"/> Not offered 1984-1985		
Linguistics 120b. <b>Syntactic Theory</b>	This course extends the syntactic framework developed in the introductory course through the study of such problems as the complement system and constraints on transformations, with emphasis on their relevance to universal grammar. Prerequisite: Linguistics 100a.	Linguistics 150b. <b>Introduction to Cognitive Science</b>	The idea of "mental representation" is central in cognitive science, and this course explores this idea from a number of perspectives. Representations evoked during visual perception, during language comprehension and production, and during reasoning are examined, as are the nature of "concepts" and role of genetic predisposition in mental representations. The methods of cognitive science are also reviewed, with an emphasis on the interdisciplinary nature of the field.
	Ms. Grimshaw		Mr. Jackendoff
Linguistics 122b. <b>Investigations in an Unfamiliar Language</b>	See Anthropology 125b. Ms. Irvine	Linguistics 153a. <b>Consciousness</b>	See Psychology 153a. Messrs. Jackendoff and Morant
Linguistics 125b. <b>Advanced Syntactic Theory</b>	Recent developments in syntax, including such topics as constraints on rules, trace theory, government and binding, and lexical-functional grammar. Prerequisite: Linguistics 100a.	Linguistics 173aR. <b>Psycholinguistics</b>	See Psychology 173aR. Mr. Zurif
	Ms. Grimshaw	Linguistics 194b. <b>Language and Mind</b>	<input type="checkbox"/> Not offered 1984-1985
Linguistics 130aR. <b>Semantics</b>	This course explores the semantic structure of language in terms of current linguistic theory. Topics to be covered include the nature of semantic representation, functional structure, presupposition and reference. Mr. Jackendoff	Linguistics 197a. <b>Language Acquisition and Development</b>	See Psychology 197a. Ms. Grimshaw
		Linguistics 199 a and b. <b>Directed Research</b>	Staff
		Linguistics 215bR. <b>Advanced Phonology</b>	Recent developments in phonological theory, with special emphasis on prosodic phonology including autosegmental theories of tone, nonlinear morphology and phonology, and metrical theories of stress. Mr. Prince

## Russian

See joint Program of Literary Studies

## Sociology

### Objectives

The graduate program in Sociology is primarily a doctoral program and is designed for students who intend to devote themselves to teaching and research in sociology. The student may, by satisfying certain requirements, receive the M.A. degree. The general objective is to educate students in the major areas of sociology with specialization in several of them.

### Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Sociology Department.

In addition, all prospective students are required to submit written material (papers, etc.) representative of their best work, which need not be, however, of a sociological nature.

### Faculty

Associate Professor **Gordon A. Fellman**, Chair: Marx and Freud, Social stratification.

Professor **Egon Bittner**: Sociology of law. Social control.

Professor **Ralph Miliband**: Comparative social structures. Political sociology. Social and political theory.

Professor **George W. Ross**: Political sociology. Social theory.

Professor **Morris S. Schwartz**: Social psychology. Social psychiatry. Peace Studies.

Professor **Maurice R. Stein**: Communities. Culture, counseling, consciousness.

Professor **Irving K. Zola**: Sociology of health and illness. Deviance. Field Studies.

Professor Emeritus **Kurt H. Wolff**: Sociological theory. Sociology of knowledge. Phenomenology and sociology.

Associate Professor **Karen E. Fields**: Sociology of religion. Sociology of development.

Associate Professor **Charles S. Fisher**: Technology and environment. Social psychology of consciousness.

Associate Professor **Gila J. Hayim**: Sociological theory. Phenomenology. Existential and critical theory. Criminology.

Assistant Professor **Asoka Bandarage**: Third World development. Race and ethnic relations. Sociology of women.

Assistant Professor **Kathleen Barry**: Feminist theory. Family. Sociology of education.

Assistant Professor **Peter Conrad**: Sociology of health and illness. Deviance. Field methods.

Assistant Professor **Paula M. Rayman**: Urban and community sociology. Organizations and occupations.

Assistant Professor **Shulamit Reinharz**: Qualitative methodology. Social gerontology. Feminist research. Social psychology. Group dynamics.

### Degree Requirements

#### Doctor of Philosophy

##### Program of Study.

Students entering the Ph.D. program in Sociology are expected to undertake a two-year program of course work, as a part of which they are obliged to take the departmental Pro-Seminar (Sociology 290). The initial program of studies will be arranged in consultation with the graduate student's adviser. Consideration will be given to graduate work done elsewhere but formal transfer credit will be assigned only after the successful completion of the first year of study.

##### Requirements for the M.A.

An M.A. may be granted after the successful completion of three semesters of course work and submission of two substantial research papers to be approved by the Department.

##### Residence Requirements.

The minimum residence for the degree of Doctor of Philosophy is two years. It is expected that the Ph.D. will be earned within five years.

##### Language Requirements.

There is no foreign language requirement for the Ph.D. degree.

#### Qualifying Examinations.

During a student's residency until the time of his or her formal admission to candidacy, the specific planning, evaluation and accreditation of his or her entire course of study will be in the hands of each student's Guidance-Accreditation Committee composed of three faculty members. Along with the student, this committee will lay out a general course of study designed to meet the interests and needs of the student. Upon completion of this course of study, the student will take an oral qualifying examination covering both general sociology and the areas of the student's special interests. It is assumed that students will fulfill their accreditation before the end of their third year of residence.

#### Admission to Candidacy.

A student shall be eligible for admission to candidacy for the Ph.D. upon fulfillment of the residence requirements, passing the departmental qualifying examination, and successful defense of a dissertation proposal. The work on the doctoral dissertation will be supervised by a Dissertation Committee.

#### Dissertation and the Final Oral Examination.

The Ph.D. dissertation may be accepted by the Department upon the recommendation of the Dissertation Committee. To be granted the degree, the student is required to defend the dissertation in a public Final Oral Examination.

## Courses of Instruction

Sociology 101a.  
**American Society**  Not offered 1984-1985

Sociology 102a.  
**Social Psychiatry**  Not offered 1984-1985

Sociology 102b.  
**Social Psychiatry**  Not offered 1984-1985

Sociology 103aR.  
**The Sociology of Mental Illness and Health**  Not offered 1984-1985

Sociology 104aR.  
**Sociology of Education**  A study of educational institutions which examines pedagogy, educational structures and ideologies as they relate to social inequality in the broader society. This course examines the role of the institution of education as a force for social change versus the idea that education's function is to reinforce prevailing social conditions.

Ms. Barry

Sociology 105aR.  
**Feminist Critique of Contemporary Social Institutions I**  Study of the various issues addressed in feminist activism (i.e. family, childcare, reproductive rights, employment discrimination, social construction of sexuality and lesbian rights, sexual violence) as they form a critique of social and political institutions, analysis of the structural, ideological and psychological dimensions of sex oppression.

Ms. Barry

Sociology 107a.  
**Issues in Social Psychology**  Not offered 1984-1985

Sociology 108bR.  
**Critiques of Contemporary Society**  Analysis of major approaches in contemporary sociology and their implications for the modern individual. Emphasis is on methods and functions of social criticism. Theorists like Comte, Weber, Ellul, Marcuse, Rieff, Williams and others will be considered.

Ms. Hayim

Sociology 109bR.  
**Black Intellectuals and the Crisis of the Twentieth Century**  Considers major political writers and leaders in the United States, Africa and the Caribbean by passing in review the twentieth century as seen from the standpoint of their work. Includes Dubois, Garvey, Nkruman, King, Rodney and others.

Ms. Fields

Sociology 110bR.  
**Sociology of Knowledge**  Not offered 1984-1985

Sociology 112b.  
**Social Class, Freedom and Equality**

The concept of social class; its role in determining life changes, lifestyles, income, occupation and power; theories of class and inequality; selected social psychological aspects of social class and inequality; American class structure and dynamics; American social class and imperialism.

Mr. Fellman

Sociology 113b.  
**Women and Work**  Not offered 1984-1985

Sociology 116b.  
**Comparative Ethnic Relations**

This course will examine selected issues in the origin and evolution of race and ethnic relations in the U.S. and several other countries from a historical and comparative perspective. A critical analysis of concepts (such as prejudice, exploitation), and alternative theories and strategies (such as assimilation, separation), as well as their relevance to ethnic relations in the selected countries will be presented.

Ms. Bandarage

Sociology 118a.  
**American Jewish Life and Institutions**  Not offered 1984-1985

Sociology 119a.  
**Militarism: The Arms Race and American Society**

The objective of the course is to increase comprehension of the consequences of militarism and the arms race for American society. Attention will be given to the post-World War II development of militarism and its relationship to American economic, political and social institutions including focus on issues of national security, nuclear proliferation and modern disarmament activity.

Messrs. Fellman and Schwartz

Sociology 119b.  
**Social Change: The Nonviolent Movement**

This course will provide an introduction to the theories, concepts and practice of nonviolence. We will explore varied applications of nonviolence including civil disobedience, conscientious objection, conflict and resolution and national defense. The course will cover comparative and American nonviolent movements. Readings will include works by Gandhi, Thoreau, King and Deming.

Ms. Rayman

Sociology 120aR.  
**Sociology of Underdevelopment I**

This course will examine selected aspects of the phenomenon of underdevelopment, paying particular attention to economic, political and social factors internal to Third World societies. Although the course will be informed throughout by general theorizing about underdevelopment and will include theoretical readings, it will emphasize the local consequences of large-scale processes. Topics will include migration, rural organization, education and urban growth. The course is designed with the undergraduate concentrator in one of the social sciences in mind.

Ms. Fields

Sociology 121bR. <b>Sociology of Mass Communications</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 141b. <b>Advanced Seminar on Marx and Freud</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 122aR. <b>Sociology of Power</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 144b. <b>Sociopsychological Dimensions of the Arms Race</b>	In this course we will read the literature in, discuss and critically evaluate, the sociopsychological theories, speculations, interpretations and conceptualizations that explain and try to understand the arms race.  Mr. Schwartz
Sociology 126a. <b>Sociology of Deviance</b>	An investigation of the sociological perspectives of deviance, focusing particular attention on definitional, sociopolitical and interactional aspects and societal response. Includes a review of theory and current research and discussions of various forms of non-criminological deviance and social control.  Mr. Conrad	Sociology 147aR. <b>The Sociology of Organizations and Occupations</b>	An introduction to the social structure of work organizations and occupations in American society. Issues such as power and bureaucracy, career mobility, women and work, unemployment and change in the work place will be examined. The focus includes corporations and unions; the public and private sectors of our economy.  Ms. Rayman
Sociology 126b. <b>Planned Communities</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 148b. <b>Social Psychology of Consciousness II</b>	This course will explore various senses of the self and of society as described in both contemporary and social psychology and traditional Eastern culture. Focus will be on knowing the world in terms of the self's relation to it as exemplified in sociological field work and in meditation. Analysis of parables as a mode of teaching these skills will be explored.  Mr. Fisher
Sociology 130a. <b>The Family I</b>	This course presents a view of the family as a patriarchal institution and analyzes its relationship to other social institutions. Cross cultural analysis is employed to examine family forms, practice and ideas in terms of their impact on women. Critique of the family is approached through studying alternative life-styles and violence in the family.  Ms. Barry	Sociology 150b. <b>Sociology of Revolutionary Change</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 132a. <b>Urban Sociology</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 151b. <b>Fieldwork in Social-Settings: Environmental Research</b>	The purpose of this course is to provide students with an opportunity to do first hand research in a setting of their choice. This could be in terms of a specific research project or an internship. Students are expected to find their own settings, subject to approval by instructor. Research techniques including participant-observation, interviewing and document analysis will be presented along with appropriate methods for data analysis. Each student will prepare a sociological report on fieldwork experience. Enrollment limited to 12.  Mr. Conrad
Sociology 135a. <b>Group Process</b>	Interpretation of interpersonal behavior and group development, based in part on observation of the group itself. Readings will include material from psychology and social anthropology as well as sociology. Enrollment limited to 12 students.  Section 1: Mr. Schwartz Section 2: Ms. Reinharz	Sociology 155bR. <b>Social Movement</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 135b. <b>Group Process — Advanced</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 160a. <b>Social Conflict and Its Control</b>	This course is concerned with social conflict as it relates to class, race, ethnicity and gender; and with ways in which it is controlled, in society and by the state. Different theoretical constructs relating to social conflict will be considered with reference to contemporary societies, notably the United States and Western Europe; comparisons will be made with Soviet-type societies.  Mr. Miliband
Sociology 141a. <b>Marx and Freud</b>	The course stresses Marxian and Freudian treatment of human nature, human potential, social stability, conflict, change, consciousness, social class and the relationship between family and social process. Topics of contemporary importance are reviewed in the light of both traditions. Attempts to combine the two approaches are examined.  Mr. Fellman		

Sociology 164a. <b>Existential Sociology</b>	This course is an introduction to existential thought and its relation to the discipline of sociology. Existential evaluation of selected theories on human nature and interaction, individual freedom and social ethics, the genesis and fate of the modern human group, types of authority, etc. Readings include works by Sartre, Durkheim, Goffman, Nietzsche, Kierkegaard, Mead and Merleau-Ponty.	Sociology 177b. <b>Aging in Society</b>	This course explores the social aspects of aging and old age in our society. We examine the definition and treatment of age in various societies with an eye for understanding the contemporary Western response to age. We will explore the experience of aging in different settings in our society, and the survival strategies of old age. Fieldwork projects will be encouraged.
	Ms. Hayim		Ms. Reinhartz
Sociology 165a. <b>Sociology of Birth and Death I</b>	This course will explore the ways in which different societies shape the human experience of birth and death. It will focus on recent changes in the social settings and meanings of birth and death in advanced industrial societies. Topics to be covered include Eastern attitudes towards birth and death, the Holocaust and nuclear war, the social implications of medical technologies and the home birth and hospice movements.	Sociology 178a. <b>Sociology of the Professions</b>	An introduction to the professions in American society, from law and medicine to the public service, academic and business professions. Topics will include: the structure of careers and professional organizations, the schooling process, personal and family stress, bureaucratic work, relation to clients and government, alternative forms of professional work.
	Mr. Stein		Mr. Ross
Sociology 165bR. <b>Sociology of Birth and Death II</b>	A continuation of Sociology 165a.	Sociology 179a <b>The Contemporary American Jewish Family</b>	See NEJS 35 for description.
	Mr. Stein		Mr. Brodbar-Nemzer
Sociology 167a. <b>Comparative Social Structures: Advanced Capitalistic Societies</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 181a. <b>Methods of Social Research</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 171aR. <b>Women, Race and Class</b>	This course will examine the position of Third World women in the U.S. and in Asia, Africa and Latin America from a historical and comparative perspective. The unity and diversity of the female experience will be examined in the context of socioeconomic transformations taking place in the Third World.	Sociology 185a and b. <b>Research Methods and Statistics</b>	See Social Welfare 4.01, 4.02.
	Ms. Bandarage		Mr. Kurtz
Sociology 172b. <b>The Family in the United States</b>	See American Studies 150b.	Sociology 188b. <b>Sociology of Law</b>	The legal order considered in a framework of cross-cultural and historical comparison. The role of the instruments of the law and of the administration of justice in contemporary society.
	Mr. Fuchs		Mr. Bittner
Sociology 173b. <b>Contemporary Social Problems</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 189bR. <b>Introduction to the History of Legal Thought</b>	A review of the intellectual development of Western conceptions of legality and of legal practice, considered against the background of social change. Materials will be drawn from the history of Europe and the United States, from the late Middle Ages to the modern era.
			Mr. Bittner
Sociology 174b. <b>Technology and Environment</b>	Nature and human productive activities are looked at in terms of the ways they affect each other. Transformations of the landscape, the evolution of industrial technology, biological change, agriculture, and different kinds of environmental impact will be discussed. Farms, factories, forests, wilderness and cities are examined.		
	Mr. Fisher		
Sociology 176bR. <b>Issues in Third World Development</b>	<input type="checkbox"/> Not offered 1984-1985		

Sociology 190b. <b>On the Caring of Caretaker Institutions</b>	An analysis of the structural arrangements of medical practice and of medical settings. Problems of communication and role relationships among professions and between patients and medical personnel will be examined. The impact of structures and role relationships on quality and quantity of medical care and on use of resources will be analyzed.	Sociology 209bR. <b>Class and Politics</b>	An examination of theories and descriptions of the relationship between social structure and policy.
	Mr. Conrad		Mr. Ross
Sociology 191a. <b>Health, Community, and Society</b>	An exploration into interrelationships of the nature of society and societies on the existence and treatment of health and illness. Topics include: conceptions of health and illness, patient careers, and the place of social science in medicine.	Sociology 210aR. <b>The Sociology of Development and Underdevelopment</b>	This course proposes the exercises of defining its object, "development." To carry out the exercise it will examine historical and current cases and theories, as well as key concepts which have entered the discipline of sociology through debates about the meaning of "development" and about the proper terms of its analysis.
	Mr. Conrad		Ms. Fields
Sociology 192b. <b>Healing and Healers: Self Care/Self Help Movement</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 211a. <b>Research on Women and Society</b>	This course examines the impact of politico-economic and cultural changes at the international and national levels on the lives of Third World women. Emphasis will be given to the cultural constructions of gender and women's conformity/resistance to those constructions; relevance of sociological/anthropological theories including feminist theories to Third World women's lives across class/age/marital status, etc.
Sociology 196b. <b>Seminar: Writing and the Social Sciences</b>	<input type="checkbox"/> Not offered 1984-1985		Ms. Bandarage
Sociology 200b. <b>Contemporary Social Thought</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 214aR. <b>Topics in Social Psychology: Freud and the Freudian Tradition</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 203b. <b>Field Methods</b>	The methodology of sociological field research in the qualitative research tradition. Readings will include theoretical statements as well as experiential accounts of researchers in the field. The course will include specific methods and procedures of data collection (participant observation, interviewing, collaborative research, systematic observation, oral history) and data analysis.	Sociology 215a. <b>The Sociology of State Action</b>	An examination of theories and concepts which have been advanced to explain the dynamics of state action in different social and economic contexts, notably in such advanced capitalistic societies as the USA and in Soviet-type societies, notably in the USSR. Recent discussions of the degree to which the state acts independently of social and economic forces in society will be considered, as will concrete cases of state action.
	Ms. Reinhartz		Mr. Miliband
Sociology 205a. <b>Sexual Stratification: Historical and Comparative Perspectives</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 216b. <b>The Frankfurt School and Critical Theory</b>	This course analyzes the foundations of critical theory and evaluates its reformation of the concepts and prospects of social change. Readings include Hegel, Gramsci, Lukacs, Marcuse, Habermas, Offe and Sartre.
Sociology 207aR. <b>Feminist Theory</b>	<input type="checkbox"/> Not offered 1984-1985		Ms. Hayim
Sociology 208a. <b>Seminar in the Sociology of Organization: The Industrial Labor Process</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 217a. <b>Problems and Issues in the Sociology of Health and Illness</b>	<input type="checkbox"/> Not offered 1984-1985

Sociology 218a and b. <b>Advanced Topics in Social Theory and Methods: Surrender and Catch — Experience and Inquiry Today</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 220b. <b>Seminar on the Sociology of Politics</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 219a. <b>Social Systems and Political Forms: Social Conflict and its Management</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 221a. <b>Advanced Topics in Sociological Theory: Sociology of Religion</b>	<input type="checkbox"/> Not offered 1984-1985
Sociology 219b. <b>Advanced Topics in Political Sociology</b>	<input type="checkbox"/> Not offered 1984-1985	Sociology 225a. <b>Deviance: Theories and Research</b>	<input type="checkbox"/> Not offered 1984-1985
		Sociology 226aR. <b>Theories in Social Psychology</b>	An examination of some major theorists of self and society, social interaction and interpersonal relations. Theorists considered will include Cooley, Mead, Sullivan, Goffman and Buber.  Mr. Schwartz

## Spanish

See Joint Program of Literary Studies

## Theater Arts

Objectives	Admission
<p>The Master of Fine Arts Program in Theater Arts is designed both to train and to educate —to develop skilled craftsmen of knowledge and judgment about the arts.</p> <p>Professionally oriented training is offered in three theatrical disciplines: <b>Acting</b> (including an <b>Acting/Directing</b> option), <b>Design/Technical</b>, and <b>Dramatic Writing</b>.</p> <p>The production program provides extensive practical experience for all students on and behind the stages of the three Spingold theaters, where the actors act, the designers design and construct, and the playwrights have the opportunity to see their accepted plays produced.</p>	<p>The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Please note, the GRE is not required for Theater Arts admission. Students apply for admission to one of the three disciplines and, in addition to the standard application procedures, Acting applicants are seen in an audition/interview, Design/Technical applicants attend an interview with portfolio evaluation, and Dramatic Writing applicants submit one or more original playscripts for evaluation.</p> <p>Acting and Design/Technical auditions/evaluations are held at Brandeis. Information about these auditions/evaluations will be furnished by the department <b>after</b> applications have been received; and materials from Dramatic Writing applicants will be reviewed <b>after</b> applications have been received.</p> <p>Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the Graduate School by March 1 of their first year in residence.</p>

**Faculty**

Professor **Martin Halpern**, Chair: Playwriting and dramatic literature.

Professor **James H. Clay**: Directing and theater history.

Visiting Professor **John Bush Jones**: Dramatic theory, literature and criticism.

Professor **Theodore Kazanoff**: Acting and directing.

Adjunct Professor **Samuel Kirkpatrick**: Scenic design.

Professor **Charles W. Moore**: Acting and directing.

Associate Professor **Robert O. Moody**: Scene painting.

Associate Professor **Maureen Heneghan Tripp**: Costume design.

Assistant Professor **Donna Aronson**: Voice and speech.

Lecturer with the rank of Associate Professor

**David Wheeler**: Directing

Lecturer **Alex Davis**: Voice and speech.

Lecturer **Flicka Wilmore**: Singing.

Artist-in-Residence **Daniel Gidron**: Acting and directing.

Artist-in-Residence **Barbara Harris**: Stage management.

Artist-in-Residence **Theodore Janello**: Technical direction.

Artist-in-Residence **Denise Loewenguth**: Costuming.

Artist-in-Residence **Annie Loui**: Movement.

**Degree Requirements****Master of Fine Arts****Residence Requirements.**

Acting: two years. Acting with Certification: three years. Design/Technical: three years. Dramatic Writing: two years. Dramatic Writing with Certification: three years.

Actors normally earn the M.F.A. degree in two years. A third-year program for actors, and an acting/directing option available to selected third-year actors, is by invitation from the faculty. Playwrights also normally earn the M.F.A. in two years. A third-year program for playwrights is offered to, at most, one playwright annually on invitation from the faculty. Students may elect to accept the invitation for a third year of study, or may decline and have the two-year M.F.A. conferred. Candidates who complete the third year are granted the M.F.A. with Certification.

**Programs of Study****Acting**

The acting faculty provides close supervision of class and performance work for first-year actors; second- and third-year actors are the core of the acting company for mainstage and other production activities. The third year for actors may include an internship at a major theater company for one production during the academic year.

The Acting/Directing Option exists for those actors who wish a program where directing is explored with minimal technical elements. These students receive a combination of acting and directing assignments in the third year.

All actors (with the exception of first year in the first half of the first term, who are barred from performance work) are required to audition for and play as cast in all major productions, unless excused by the chairman after consultation with the director.

Actors are required to serve on a crew for one major production each year (about sixty hours); normally this crew may not be for a play in which the student is also performing. There is no crew requirement for third-year students in the Acting/Directing Option, but stage managing is recommended. Students are expected to help on crew whenever they have time, regardless of formal credit.

**Courses of Instruction****Required Courses First Year:**

Theater Arts 201. **Seminar in Dramatic Theory, Method, Literature**

Mr. Jones

Theater Arts 203. **Advanced Acting Studies: 1**

Study of acting process through observation, physical action, improvisation, scoring, etc. Freeing actor's instrument and working on text become combined through exercise and scene work.

Messrs. Kazanoff, Gidron and Moore

Theater Arts 205. **Speech I**

Mr. Davis

Theater Arts 207. **Movement for the Actor: I**

Includes regular fencing classes.

Ms. Loui

Theater Arts 209. **Voice/Speech Studies for the Actor: I**

Includes regular classes in singing and Alexander Technique.

Ms. Aronson

Theater Arts 225. <b>Production Laboratory: I</b>	Mr. Janello	Theater Arts 303. <b>Voice/Speech Studies for the Actor: III</b>	Includes regular classes in singing and Alexander Technique. Ms. Aronson
Theater Arts 233. <b>Singing I</b>	Group Tutorial. Ms. Wilmore	Theater Arts 304. <b>Rehearsal and Performance</b>	Mr. Kazanoff
<b>Required Courses Second Year:</b>			
Theater Arts 204. <b>Advanced Acting Studies: II</b>	Continuing work in exploration of process which integrates self and text through study of Laban, Chekov and techniques which help actor objectify emotion. Scoring now includes through-line and overall objective. Scenes from all of dramatic literature.  Messrs. Kazanoff, Gidron and Moore	Theater Arts 325. <b>Production Laboratory: III</b>	Mr. Janello
Theater Arts 208. <b>Movement for the Actor: II</b>	Includes regular classes in fencing. Ms. Loui	Theater Arts 334. <b>Singing III</b>	Ms. Wilmore
Theater Arts 210. <b>Voice/Speech Studies for the Actor: II</b>	Includes regular classes in singing and Alexander Technique. Ms. Aronson	Those students taking the Acting/Directing Option will take Theater Arts 301 and 304 and either 302 or 303. In addition, they will take:	
Theater Arts 226. <b>Production Laboratory: II</b>	Mr. Janello	Theater Arts 202. <b>Seminar in Dramatic Structure</b>	Mr. Jones
Theater Arts 234. <b>Singing II</b>	Group tutorial. Ms. Wilmore	Students enrolled in the Acting/Directing Option may, with the permission of the instructor, also take:	
Those students interested in the Acting/Directing Option who receive faculty approval will also take:		Theater Arts 180a and b. <b>Production Concepts</b>	Mr. Clay
Theater Arts 190a. <b>A Study of Acting Theory and Method as They Relate to 20th Century Theater</b>	Mr. Kazanoff	Design- Technical	All major productions are designed by graduate students. Therefore, a student may be expected to be involved in a design capacity on at least three productions during each year. In addition, students will participate on various production crews as arranged in consultation with the faculty.  The graduate design thesis (Theater Arts 310) is the final project in the Design/Technical program. In some cases a student's mainstage design assignments in the second or third year may constitute part of the thesis project.
<b>Required Courses First Year:</b>			
Theater Arts 201. <b>Seminar in Dramatic Theory, Method, Literature</b>	Mr. Jones	Theater Arts 201. <b>Scenic Design: I</b>	Mr. Kirkpatrick
Theater Arts 190b. <b>A Study of Directing Theory and Method as They Relate to 20th Century Theater</b>	Mr. Kazanoff	Theater Arts 211. <b>Costume Construction</b>	Ms. Loewenguth
<b>Required Courses Third Year:</b>			
Theater Arts 301. <b>Advanced Acting Studies: III</b>	Includes a weekly scene workshop. Mr. Kazanoff	Theater Arts 214. <b>Costume Construction</b>	Laboratory fee to be arranged. Ms. Loewenguth
Theater Arts 302. <b>Movement for the Actor: III</b>	Includes regular classes in fencing. Ms. Loui	Theater Arts 217. <b>Costume Design</b>	Ms. Heneghan Tripp

Theater Arts 219. <b>Lighting: I</b>	Laboratory fee to be arranged. To be announced	Theater Arts 228. <b>Scenic Painting: II</b>	Laboratory fee: to be arranged. Mr. Moody
Theater Arts 221. <b>Sketching and Rendering: I</b> Section A:	Costume Rendering To be announced	Theater Arts 231. <b>Life Drawing: II</b>	Laboratory fee determined by enrollment. Mr. Moody
Section B:	Set Rendering Mr. Moody	Theater Arts 232. <b>Costume Construction: II</b>	Ms. Loewenguth
Theater Arts 222. <b>Drafting</b>	Laboratory fee to be arranged. Mr. Janello	<b>Required Courses Third Year</b>	
Theater Arts 223. <b>Scenic Painting: I</b>	Laboratory fee to be arranged. Mr. Moody	Students will take the group of courses ( <b>a</b> or <b>b</b> above) they did not take in the second year; all of these courses are listed below. All students will enroll for an Independent Study and for a Thesis Project.	
Theater Arts 225. <b>Production Laboratory: I</b>	Mr. Janello	Theater Arts 212. <b>Scenic Design: II</b>	Mr. Kirkpatrick
Theater Arts 230. <b>Life Drawing: I</b>	Laboratory fee determined by enrollment. Mr. Moody	Theater Arts 218. <b>Costume Design: II</b>	Ms. Heneghan Tripp
<b>Required Courses Second Year:</b>		Theater Arts 227. <b>Sketching and Rendering: II</b> Section A:	Costume Rendering To be announced
Students will take either (a) Costume Design II, Costume Construction II and Section A of Sketching and Rendering II, or (b) Scenic Painting II and Section B of Sketching and Rendering II. Faculty will determine which group of courses a student will take and, in rare instances, may recommend that a student take both groups. All students will take Lighting Design II, Stage Mechanics, Life Drawing II and Production Laboratory II.		Section B:	Set Rendering Mr. Moody
Theater Arts 212. <b>Scenic Design: II</b>	Mr. Kirkpatrick	Theater Arts 228. <b>Scenic Painting: II</b>	Mr. Moody
Theater Arts 218. <b>Costume Design: II</b>	Ms. Heneghan Tripp	Theater Arts 232. <b>Costume Construction</b>	To be announced
Theater Arts 220. <b>Lighting: II</b>	Laboratory fee to be arranged. To be announced	Theater Arts 300. <b>Independent Study</b>	Staff
Theater Arts 224. <b>Stage Mechanics</b>	Laboratory fee to be arranged. Mr. Janello	Theater Arts 310. <b>Thesis Projects</b>	Full presentation of projected designs for the scenery, costumes and lighting for a specific play or opera, presented in portfolio form, with the emphasis dependent upon the student's major field or interest.
Theater Arts 226. <b>Production Laboratory: II</b>	Mr. Janello	Staff	
Theater Arts 227. <b>Sketching and Rendering: II</b> Section A:	Costume Rendering To be announced		
Section B:	Set Rendering Mr. Moody		

**Dramatic Writing**

Dramatic writing students are required to serve on two crews each year (about 120 hours). They are also required to participate in the preparation of any studio, workshop or major production of their plays mounted during the time they are in residence, and this counts as one crew. In rare instances, acting in a major production may count as one crew.

**Required Courses First Year:**

Theater Arts 201.  
**Seminar in Dramatic Theory, Method, Literature** Mr. Jones

Theater Arts 215. A double-credit course.  
**Workshop in Dramatic Writing: I** Mr. Halpern

Theater Arts 225.  
**Production Laboratory: I** Mr. Janello

In addition, one elective course in the first term.

**Required Courses Second Year:**

Theater Arts 202.  
**Seminar in Dramatic Structure** Mr. Jones

Theater Arts 216. A double-credit course.  
**Workshop in Dramatic Writing: II** Mr. Halpern

Theater Arts 226.  
**Production Laboratory: II** Mr. Janello

Theater Arts 310b.  
**Thesis Projects** Mr. Halpern

In addition, one elective course in the first term.

**Required Courses Third Year:**

Theater Arts 300.  
**Independent Study** Staff

Theater Arts 315. A double-credit course.  
**Workshop in Dramatic Writing: III** Mr. Halpern

Theater Arts 325.  
**Production Laboratory: III** Mr. Janello

In addition, one elective course each term.

# University Organization

## Board of Trustees

Under Massachusetts law, the 50-member Board of Trustees is the governing body of the university. There are also four faculty representatives and three student representatives to the board who participate in board meetings and have votes on the several committees. The chairman of the Fellows, the president of the National Women's Committee, and the president of the Alumni Association serve *ex-officio*. Alumni elect annually an Alumni Term Trustee who serves as full voting trustee for a five-year term.

## The President

The President, the chief executive officer of the university, is appointed by the Board of Trustees and is responsible for all university activities.

## Chancellor Emeritus

Chancellor Emeritus of the university is an honorary title held by Brandeis' Founding President Abram L. Sachar, whose 20 years of experience is now utilized for the welfare of the university.

## University Fellows

University Fellows comprise about 400 national leaders from a broad base of business, educational and public life who lend counsel, expertise and support to university development and planning programs.

## The President's Council

President's Councilors are leading men and women throughout the country whose skills and experience are placed at the disposal of the Brandeis president in areas of their special competence.

## The Deans

The Dean of the Faculty supervises academic policy, undergraduate and graduate curricula, the faculty and its departments of instruction.

The Dean of the College of Arts and Sciences assumes responsibility for many areas affecting the academic lives of undergraduates, including curriculum development, advisory services and the academic progress of students.

The Dean of the Graduate School of Arts and Sciences oversees the individualized programs of study for scholars, scientists and artists in 20 disciplines.

The Dean of the Florence Heller School for Advanced Studies in Social Welfare oversees the academic activities of the university's first and only professional school and its work in such areas as health, aging, income and employment, and minorities.

The Dean of Student Affairs is responsible for many areas of student life, including student activities, residence life, career planning and placement, health services, and athletics.

## The Faculty Senate

The Faculty Senate, the elected representative body of the faculty, discusses such issues as academic freedom and responsibility, university policy, appointments, tenure, dismissal and salaries.

## The Vice Presidents

The Executive Vice President for Finance and Administration oversees Brandeis' complete financial and administrative support operations. The major responsibilities include budgeting and planning, capital programs, endowment and investment management, library services, computer services, telecommunications, plant operations, employee relations, security, materials management and community and governmental relations. The Executive Vice President also serves as principal liaison with the Budget and Finance, Investment and Facilities committees of the Board of Trustees.

The Vice President for Development and University Relations is responsible for directing the institutional relations of the university related to fundraising and public affairs and information.

## Alumni Relations

The Office of Alumni Relations, located in the Gryzmish Academic Center, directs and coordinates programs and publications for all Brandeis alumni, the National Alumni Association, regional Alumni Chapters and the Alumni Fund.

## National Women's Committee

The National Women's Committee, now an organization of more than 65,000 members, has been a partner with the university since 1948. This volunteer organization gives its membership a wide range of educational offerings. These include unique study group programs with syllabi provided by Brandeis faculty; adult education seminars in local communities called "University on Wheels;" and special lectures by university speakers. The 126 chapters across the country are embassies of good will for the university. The central commitment of the Women's Committee, however, is to the Brandeis University libraries. Since it was founded by eight members in Boston, it has contributed more than 23 million dollars in support of the libraries.

## The Graduate Council

The members of the Graduate Council of the Graduate School of Arts and Sciences are appointed annually by the President of the University. Members of the Graduate Council for 1984-85 are:

The President of the University and the Dean of the Faculty of Arts and Sciences (*ex-officio*)  
The Dean of the Graduate School, (*Council Chair*)

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Department of Near  
Eastern and Judaic  
Studies

**Stuart H. Altman**,  
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Florence Heller  
Graduate School for  
Advanced Studies in  
Social Welfare

**Robert J. Art**,  
Chair,  
Department of  
Politics

**David J. DeRosier**,  
Chair,  
Department of  
Biology

**Irving R. Epstein**,  
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Sociology

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Literature

**Jack S. Goldstein**,  
Chair, Department of  
Physics

**Martin Halpern**,  
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Theater Arts

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Anthropology

**Robert Szulkin**,  
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Joint Program of  
Literary Studies

**Arthur Wingfield**,  
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Phychology

**Leon A. Jick**,  
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Department of Near  
Eastern and Judaic  
Studies

**Patricia A. Johnston**,  
Chair,  
Department of  
Classical and Oriental  
Studies

**William Kapelle**,  
Chair,  
Comparative History  
Program

**Teruhisa Matsusaka**,  
Chair,  
Department of  
Mathematics

**Allan R. Keiler**,  
Chair,  
Department of Music

**Marvin Meyers**,  
Chair,  
Committee on History  
of American  
Civilization

**Christopher Miller**,  
Chair,  
Biophysics Program

**Bernard Reisman**,  
Chair, Jewish  
Communal Service  
Program

**Jerome A. Schiff**,  
Director,  
Institute for  
Photobiology of Cells  
and Organelles

## Board of Trustees

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	<b>Judith Ferster</b> Assistant Professor of English <i>Ph.D., Brown University</i>				

<b>Erica Harth</b> Associate Professor of French and Comparative Literature <i>Ph.D., Columbia University</i>	<b>Eli Hirsch</b> Associate Professor of Philosophy and History of Ideas <i>Ph.D., New York University</i>	<b>Judith T. Irvine</b> Associate Professor of Anthropology <i>Ph.D., University of Pennsylvania</i>	<b>Leon A. Jick</b> Helen and Irving Schneider Associate Professor of American Jewish Studies <i>Ph.D., Columbia University</i>	<b>Theodore L. Kazanoff</b> Blanche, Barbara and Irving Laurie Professor of Theater Arts <i>M.A., Smith College</i>	<b>Denise King</b> Instructor in Physical Education <i>B.S., Northeastern University</i>
<b>K. C. Hayes</b> Associate Professor of Biology and Director, Foster Biomedical Research Laboratories <i>Ph.D., University of Connecticut</i>	<b>Thomas C. Hollocher Jr.</b> Professor of Biochemistry <i>Ph.D., University of Rochester</i>	<b>Alfred L. Ivry</b> Walter Stern Hilborn Professor of Near Eastern and Judaic Studies <i>D. Phil., Oxford University</i>	<b>William A. Johnson</b> Albert V. Danielsen Professor of Philosophy and Christian Thought <i>Ph.D., Columbia University</i>	<b>Philip M. Keehn**</b> Associate Professor of Chemistry <i>Ph.D., Yale University</i>	<b>Marcel Kinsbourne</b> Adjunct Professor of Psychology <i>D.M., Oxford University</i>
<b>Gila J. Hayim</b> Associate Professor of Sociology <i>Ph.D., University of Pennsylvania</i>	<b>David M. Hoose</b> Lecturer with rank of Assistant Professor of Music <i>B.M., Oberlin College Conservatory of Music</i>	<b>Ray S. Jackendoff</b> Professor of Linguistics <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Patricia A. Johnston</b> Associate Professor of Classical and Oriental Studies <i>Ph.D., University of California, Berkeley</i>	<b>Allan R. Keiler*</b> Associate Professor of Music <i>Ph.D., Harvard University</i>	<b>Sam Kirkpatrick</b> Adjunct Professor of Theater Arts <i>National Diploma, London</i>
<b>Peter Heller</b> Professor of Physics <i>Ph.D., Harvard University</i>	<b>Susan Horton</b> Adjunct Professor of English and American Literature <i>Ph.D., Brandeis University</i>	<b>Raymond Jackson</b> Adjunct Professor of Economics <i>Ph.D., Boston University</i>	<b>John Bush Jones</b> Lecturer with rank of Professor of Theater Arts <i>Ph.D., Northwestern University</i>	<b>Alice A. Kelikian*</b> Assistant Professor of History <i>D. Phil., Oxford University</i>	<b>Lawrence E. Kirsch</b> Professor of Physics <i>Ph.D., Rutgers University</i>
<b>Michael J. Henchman***</b> Associate Professor of Chemistry <i>Ph.D., Yale University</i>	<b>Judith A. Houde</b> Assistant Professor of Physical Education <i>M.S. Ed., University of Tennessee</i>	<b>David Jacobson</b> Associate Professor of Anthropology <i>Ph.D., University of Rochester</i>	<b>Peter C. Jordan</b> Professor of Chemistry <i>Ph.D., Yale University</i>	<b>Morton Keller</b> Samuel J. and Augusta Spector Professor of History <i>Ph.D., Harvard University</i>	<b>Susan Klebanow</b> Artist-in-Residence (Music) <i>M.Mus., New England Conservatory of Music</i>
<b>James B. Hendrickson</b> , Professor of Chemistry <i>Ph.D., Harvard University</i>	<b>Mark L. Hullung</b> Professor of Politics <i>Ph.D., Harvard University</i>	<b>Theodore Janello</b> Artist-in-Residence (Theater Arts) <i>M.A., University of Connecticut</i>	<b>George Joseph</b> Assistant Professor of French <i>Ph.D., Indiana University</i>	<b>Robert Owen Keohane</b> Professor of International Relations <i>Ph.D., Harvard University</i>	<b>Karen Wilk Klein</b> Associate Professor of English <i>Ph.D., Columbia University</i>
<b>Maureen Heneghan</b> Associate Professor of Costume Design	<b>Robert C. Hunt</b> Associate Professor of Anthropology <i>Ph.D., Northwestern University</i>	<b>Anne F. Janowitz</b> Assistant Professor of English and American Literature and Dana Faculty Fellow <i>Ph.D., Columbia University</i>	<b>William Kapelle</b> Associate Professor of History <i>Ph.D., University of Massachusetts</i>	<b>Hillel J. Kieval</b> Assistant Professor of History and Fellow, Tauber Institute <i>Ph.D., Harvard University</i>	<b>James Kloppenberg</b> Assistant Professor of History <i>Ph.D., Stanford University</i>
<b>Maurice Hershenson</b> George and Frances Levin Associate Professor of Psychology <i>Ph.D., Yale University</i>	<b>Kiyoshi Igusa</b> Associate Professor of Mathematics <i>Ph.D., Princeton University</i>	<b>Edward K. Kaplan</b> Associate Professor of French <i>Ph.D., Columbia University</i>	<b>Kathleen M. Karrer</b> Assistant Professor of Biology <i>Ph.D., Yale University</i>	<b>Reuven R. Kimelman**</b> Associate Professor of Near Eastern and Judaic Studies <i>Ph.D., Yale University</i>	<b>Raymond Knight**</b> Associate Professor of Psychology <i>Ph.D., University of Minnesota</i>
<b>Timothy J. Hickey</b> Instructor in Computer Science <i>M.S., University of Chicago</i>	<b>Thomas Ilgen</b> Assistant Professor of Politics <i>Ph.D., University of California, Santa Barbara</i>	<b>Gary H. Jefferson</b> Instructor in Economics <i>M.Sc., London School of Economics</i>	<b>Aaron L. Katchen</b> Assistant Professor of Near Eastern and Judaic Studies <i>Ph.D., Harvard University</i>	<b>Charles Kindleberger</b> Sachar Professor of Economics <i>Ph.D., Columbia University</i>	<b>Miroslav Krek*</b> Lecturer in Near Eastern and Judaic Studies <i>M.L.S., University of Chicago</i>
<b>Betty Hillmon</b> Lecturer in African and Afro-American Studies <i>M.A., Fresno State University</i>	<b>Robert Indik</b> Assistant Professor of Mathematics <i>Ph.D., Princeton University</i>	<b>William P. Jencks</b> Gyula and Katica Tauber Professor of Biochemistry and Molecular Pharmacodynamics <i>M.D., Harvard University</i>	<b>Gabriel Katz</b> Lecturer with rank of Assistant Professor of Mathematics <i>Ph.D., Moscow State University</i>		<b>Kenneth Kustin</b> Professor of Chemistry <i>Ph.D., University of Minnesota</i>
<b>Donald Hindley</b> Professor of Politics <i>Ph.D., Australian National University</i>					<b>Margie Lachman</b> Assistant Professor of Psychology <i>Ph.D., Pennsylvania State University</i>
					<b>On leave Fall Term 1984-85*</b> <b>On leave Spring Term 1984-85**</b> <b>On leave 1984-85***</b>

<b>James R. Lackner***</b> Meshulam and Judith Riklis Professor of Psychology <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Alan Levitan***</b> Associate Professor of English <i>Ph.D., Princeton University</i>	<b>Susan Lowey</b> Professor of Biochemistry and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., Yale University</i>	<b>Teruhisa Matusaka</b> Berenson Professor of Mathematics <i>Dr.Sc., Kyoto University</i>	<b>Helena R. Michie</b> Assistant Professor of English and American Literature <i>Ph.D., University of Pennsylvania</i>	<b>William T. Murakami,</b> Associate Professor of Biochemistry <i>Ph.D., University of Southern California</i>
<b>Robert V. Lange</b> Associate Professor of Physics <i>Ph.D., Harvard University</i>	<b>Irwin B. Levitan</b> Associate Professor of Biochemistry <i>Ph.D., McGill University</i>	<b>Robert S. Lurie</b> Assistant Professor of Economics <i>Ph.D., Yale University</i>	<b>Alan L. Mayer</b> Professor of Mathematics <i>Ph.D., Princeton University</i>	<b>Ralph Miliband**</b> Morris Hillquit Professor in Labor and Social Thought <i>Ph.D., London School of Economics</i>	<b>David W. Murray</b> Instructor in Anthropology <i>MA, University of Chicago</i>
<b>Richard H. Lansing</b> Associate Professor of Italian and Comparative Literature <i>Ph.D., University of California, Berkeley</i>	<b>Avigdor Levy</b> Associate Professor of Near Eastern and Judaic Studies <i>Ph.D., Harvard University</i>	<b>Roy C. Macridis</b> Lawrence A. Wien Professor of International Cooperation <i>Ph.D., Harvard University</i>	<b>Leslie Ann McArthur**</b> Professor of Psychology <i>Ph.D., Yale University</i>	<b>Christopher Miller</b> Professor of Biochemistry <i>Ph.D., University of Pennsylvania</i>	<b>Michael James Newman</b> Assistant Professor of Biochemistry <i>Ph.D., Harvard University</i>
<b>Kevin S. Larsen,</b> Assistant Professor of Spanish <i>Ph.D., Harvard University</i>	<b>Arthur Lewbel</b> Assistant Professor of Economics and Dana Faculty Fellow <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Robert J. Maeda</b> Professor of Fine Arts <i>Ph.D., Harvard University</i>	<b>Colquitt L. Meacham</b> Adjunct Professor of Legal Studies <i>L.L.M., Harvard University</i>	<b>Richard I. Miller</b> Adjunct Professor of Legal Studies <i>JD., Yale University</i>	<b>Alfred Nisonoff</b> Professor of Biology and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., The Johns Hopkins University</i>
<b>Rhonda Lebensbaum</b> Lecturer in Computer Science <i>Ph.D., Boston University</i>	<b>Susan Lichtman</b> Associate Professor of Fine Arts <i>M.F.A., Yale University</i>	<b>Joan M. Maling</b> Associate Professor of Linguistics <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Peter Y. Medding</b> Visiting Associate Professor of Jewish Political Studies (Lown School) <i>Ph.D., Harvard University (The Hebrew University)</i>	<b>Paul H. Monsky</b> Professor of Mathematics <i>Ph.D., University of Chicago</i>	<b>Joan L. Nissman</b> Assistant Professor of Fine Arts <i>Ph.D., Columbia University</i>
<b>Daniel Lehmann</b> Visiting Associate Professor of Computer Science <i>Ph.D., The Hebrew University (The Hebrew University)</i>	<b>Denah L. Lida</b> Professor of Spanish <i>Ph.D., University of Mexico</i>	<b>Blanche Linden-Ward</b> Lecturer with the rank of Assistant Professor of American Studies <i>Ph.D., Harvard University</i>	<b>Frank E. Manuel</b> Alfred and Viola Hart University Professor of History <i>Ph.D., Harvard University</i>	<b>Robert O. Moody Jr.</b> Associate Professor of Theater Arts	<b>Edward C. Nowacki</b> Assistant Professor of Music <i>Ph.D., Brandeis University</i>
<b>Martin A. Levin</b> Associate Professor of Politics <i>Ph.D., Harvard University</i>	<b>Henry Linschitz</b> Helena Rubinstein Professor of Chemistry <i>Ph.D., Duke University</i>	<b>Eve E. Marder</b> Associate Professor of Biology <i>Ph.D., University of California, San Diego</i>	<b>R. Shep Melnick</b> Associate Professor of Politics <i>Ph.D., Harvard University</i>	<b>Charles W. Moore</b> Professor of Theater Arts <i>M.F.A., Yale University</i>	<b>Wellington W. Nyangoni</b> Associate Professor of African and Afro- American Studies <i>Ph.D., Howard University</i>
<b>Harold I. Levine</b> Professor of Mathematics <i>Ph.D., University of Chicago</i>	<b>John E. Lisman</b> Associate Professor of Biology <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Daniel Margolis</b> Lecturer in Jewish Education <i>Ed.D., Columbia University</i>	<b>Teresa Méndez-Faith</b> Assistant Professor of Spanish <i>Ph.D., University of Michigan</i>	<b>Ricardo B. Morant</b> Minnie and Harold L. Fierman Professor of Psychology <i>Ph.D., Clark University</i>	<b>Kevin O'Brien</b> Instructor in Physical Education <i>B.A., Tufts University</i>
<b>Jerome P. Levine</b> Professor of Mathematics <i>Ph.D., Princeton University</i>	<b>Elaine P. Loeffler</b> Associate Professor of Fine Arts <i>B.A., Smith College</i>	<b>James B. Merod</b> Assistant Professor of English and American Literature <i>Ph.D., Stanford University</i>	<b>Robert B. Meyer**</b> Associate Professor of Physics <i>Ph.D., Princeton University</i>	<b>Martha A. Morrison</b> Assistant Professor of Classical and Oriental Studies and Petrie Term Assistant Professor of University Studies <i>Ph.D., Brandeis University</i>	<b>Takashi Odagaki</b> Assistant Professor of Physics <i>Dr. Sc., Kyoto University</i>
<b>Lawrence Levine</b> Professor of Biochemistry (American Cancer Society Professorship) <i>Sc.D., The Johns Hopkins University</i>	<b>Denise Loewenguth</b> Artist-in-Residence (Theater Arts)	<b>Peter Markman</b> Assistant Professor of Fine Arts <i>M.F.A., Southern Illinois University</i>	<b>Robert L. Marshall</b> Professor of Music <i>Ph.D., Princeton University</i>	<b>Susan Moller Okin</b> Associate Professor of Politics <i>Ph.D., Harvard University</i>	<b>Rudolf Oldenbourg</b> Adjunct Assistant Professor of Physics <i>Ph.D., University of Konstanz</i>
<b>Norman E. Levine</b> Associate Professor of Physical Education <i>B.S., Bates College</i>	<b>Annie Loui</b> Artist-in-Residence (Theater Arts)	<b>Danielle Marx-Scouras</b> Assistant Professor of Romance and Comparative Literature <i>Ph.D., Columbia University</i>	<b>Marvin Meyers**</b> Harry S. Truman Professor of American Civilization <i>Ph.D., Columbia University</i>	<b>Leonard C. Muellner</b> Associate Professor of Classical and Oriental Studies <i>Ph.D., Harvard University</i>	<b>On leave Fall Term 1984-85*</b>
	<b>John M. Lowenstein</b> Helena Rubinstein Professor of Biochemistry <i>Ph.D., London University</i>				<b>On leave Spring Term 1984-85**</b>
					<b>On leave 1984-85***</b>

<b>James D. Olesen***</b> Associate Professor of Music <i>B.A., University of Chicago</i>	<b>Joan L. Press</b> Associate Professor of Biology and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., University of Pennsylvania</i>	<b>Alfred G. Redfield</b> Professor of Physics and Biochemistry and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., University of Illinois</i>	<b>Michael Rosbash</b> Associate Professor of Biology <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Jerome A. Schiff</b> Abraham and Etta Goodman Professor of Biology <i>Ph.D., University of Pennsylvania</i>	<b>Silvan S. Schweber*</b> Professor of Physics and Richard Koret Professor in the History of Ideas <i>Ph.D., Princeton University</i>
<b>Richard J. Onorato***</b> Associate Professor of English <i>Ph.D., Harvard University</i>	<b>Robert O. Preyer*</b> Professor of English <i>Ph.D., Columbia University</i>	<b>Jehuda Reinharz</b> Richard Koret Professor of Modern Jewish History and Director, Tauber Institute <i>Ph.D., Brandeis University</i>	<b>Steven Rosenberg</b> Assistant Professor of Mathematics <i>Ph.D., University of California, Berkeley</i>	<b>Robert F. Schleif</b> Professor of Biochemistry <i>Ph.D., University of California, Berkeley</i>	<b>Nancy J. Scott</b> Assistant Professor of Fine Arts <i>Ph.D., New York University</i>
<b>Kwaku Osei-Hwiedie</b> Lecturer with rank of Assistant Professor of African and Afro- American Studies <i>Ph.D., Brandeis University, Heller Graduate School</i>	<b>Alan Sanford Prince</b> Jacob Ziskind Visiting Associate Professor of Linguistics and Cognitive Science <i>Ph.D., Massachusetts Institute of Technology (University of Massachusetts, Amherst)</i>	<b>Shulamit Reinharz</b> Assistant Professor of Sociology <i>Ph.D., Brandeis University</i>	<b>Myron Rosenblum</b> Professor of Chemistry <i>Ph.D., Harvard</i>	<b>Naomi B. Schmidt</b> Adjunct Assistant Professor of Computer Science <i>Ph.D., Columbia University</i>	<b>James C. Scovel</b> Assistant Professor of Mathematics <i>Ph.D., New York University</i>
<b>Jessie Ann Owens</b> Associate Professor of Music <i>Ph.D., Princeton University</i>	<b>Lawrence B. Pulley***</b> Assistant Professor of Economics <i>Ph.D., University of Virginia</i>	<b>Bernard Reisman**</b> Associate Professor of American Jewish Communal Studies and Director, Hornstein Program <i>Ph.D., Brandeis University</i>	<b>Robert Rosenblum</b> Adjunct Associate Professor of Legal Studies <i>Ph.D., University of Colorado</i>	<b>George W. Ross**</b> Professor of Sociology <i>Ph.D., Harvard</i>	<b>Erik Selsing</b> Assistant Professor of Biology and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., Purdue University</i>
<b>Richard S. Palais***</b> Professor of Mathematics <i>Ph.D., Harvard University</i>	<b>Dominique Rabaté</b> Lecturer in French <i>M.A., Ecole Normale Supérieure</i>	<b>Isaac Cuir Riaik</b> Lecturer with rank of Assistant Professor of African and Afro- American Studies <i>Ph.D., Stanford University</i>	<b>Zick Rubin</b> Louis and Frances Salvage Professor of Social Psychology <i>Ph.D., University of Michigan</i>	<b>Howard J. Schnitzer</b> Professor of Physics <i>Ph.D., University of Rochester</i>	<b>Harold S. Shapero</b> Walter W. Naumburg Professor of Music <i>A.B., Harvard University</i>
<b>Thomas H. Parker</b> Assistant Professor of Mathematics <i>Ph.D., Stanford University</i>	<b>Esther Ratner</b> Lecturer with rank of Assistant Professor of French <i>Ph.D., Brandeis University</i>	<b>Christopher Ricks</b> Fannie Hurst Visiting Professor of English <i>M.A., Oxford University (University of Cambridge)</i>	<b>Murray Sachs</b> Professor of French <i>Ph.D., Columbia University</i>	<b>John E. Schrecker</b> Associate Professor of History <i>Ph.D., Harvard</i>	<b>Laurie A. Shepard</b> Lecturer in French and Italian <i>M.A., Boston College</i>
<b>Hugh N. Pendleton</b> Professor of Physics <i>Ph.D., Carnegie Institute of Technology</i>	<b>Judith Rauchwarger</b> Assistant Professor of Spanish <i>Ph.D., University of Michigan</i>	<b>Benson Saler</b> Associate Professor of Anthropology <i>Ph.D., University of Pennsylvania</i>	<b>Peter W. Samal</b> Lecturer in Chemistry <i>Ph.D., Tufts University</i>	<b>Stephen A. Schucker</b> Professor of History <i>Ph.D., Harvard University</i>	<b>Susan Shevitz</b> Lecturer in Jewish Education (on the Summer N. Milender Family Foundation) <i>Ed.M., Harvard University</i>
<b>Peter A. Petri</b> Associate Professor of Economics <i>Ph.D., Harvard University</i>	<b>Benjamin C. I. Ravid</b> Jennie and Mayer Weisman Associate Professor of Jewish History <i>Ph.D., Harvard University</i>	<b>David H. Roberts</b> Associate Professor of Astrophysics <i>Ph.D., Stanford University</i>	<b>Jerry Samet</b> Assistant Professor of Philosophy and History of Ideas <i>Ph.D., City University of New York</i>	<b>Barney K. Schwalberg</b> Professor of Economics <i>Ph.D., Harvard</i>	<b>Takahiro Shiota</b> Assistant Professor of Mathematics <i>Ph.D., Massachusetts Institute of Technology</i>
<b>Conrad Pope***</b> Assistant Professor of Music <i>M.F.A., Princeton University</i>	<b>Mary Ruth Ray</b> Artist-in-Residence (Music) <i>B.M., State University of New York, Purchase</i>	<b>Marguerite S. Robinson***</b> Professor of Anthropology <i>Ph.D., Harvard University</i>	<b>Morris S. Schwartz</b> Mortimer Gryzmish Professor of Human Relations <i>Ph.D., University of Chicago</i>	<b>William Shipman</b> Instructor in Physical Education <i>B.A., University of North Carolina</i>	<b>Stephanie Sieburth</b> Lecturer in Spanish <i>M.A., Princeton University</i>
<b>Hillard Pouncey</b> Assistant Professor of African and Afro- American Studies <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Paula M. Rayman</b> Assistant Professor of Sociology <i>Ph.D., Boston College</i>	<b>Nicholas Rodis</b> Professor of Physical Education <i>Ed.M., American International College</i>	<b>Susan Scheinberg</b> Assistant Professor of Classical and Oriental Studies <i>Ph.D., Harvard University</i>		On leave Fall Term 1984-85*
<b>Alex T. Prengel Jr.</b> Lecturer with rank of Assistant Professor of Computer Science <i>Ph.D., Brandeis University</i>					On leave Spring Term 1984-85**
					On leave 1984-85***

<b>Lawrence Siegel</b> Artist-in-Residence (Music) <i>M.F.A., Brandeis University</i>	<b>Frederic T. Sommers***</b> Harry A. Wolffson Professor of Philosophy <i>Ph.D., Columbia University</i>	<b>Martha Strom</b> Lecturer with rank of Assistant Professor of English and American Literature <i>Ph.D., Princeton University</i>	<b>Gary A. Tobin</b> Associate Professor of Jewish Community Research and Planning (Low School) <i>Ph.D., University of California, Berkeley</i>	<b>David L. Waltz</b> Professor of Computer Science <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Jeffrey Williams</b> Assistant Professor of Economics <i>Ph.D., Yale University</i>
<b>Marianne L. Simmel</b> Adjunct Professor of Psychology <i>Ph.D., Harvard University</i>	<b>Lee J. Spencer</b> Lecturer in Physics <i>Ph.D., State University of New York, Stony Brook</i>	<b>Louis S. Stuhl</b> Assistant Professor of Chemistry <i>Ph.D., Cornell University</i>	<b>Ian A. Todd</b> Associate Professor of Classical and Oriental Studies <i>Ph.D., University of Birmingham</i>	<b>Mitchell Wand</b> Visiting Professor of Computer Science <i>Ph.D., Massachusetts Institute of Technology (Indiana University)</i>	<b>Flickie Wilmore</b> Lecturer in Theater Arts <i>M.Mus., Southwest Texas State University</i>
<b>Marshall Sklare***</b> Klutznick Family Professor of Contemporary Jewish Studies and Sociology and Director, Center for Modern Jewish Studies <i>Ph.D., Columbia University</i>	<b>Susan Staves</b> Professor of English <i>Ph.D., University of Virginia</i>	<b>Carol L. Such***</b> Assistant Professor of Economics <i>Ph.D., Stanford University</i>	<b>James T. Todd</b> Assistant Professor of Psychology <i>Ph.D., University of Connecticut</i>	<b>Lawrence J. Wangh*</b> Associate Professor of Biology <i>Ph.D., Rockefeller University</i>	<b>Arthur Wingfield</b> Professor of Psychology <i>D.Phil., Oxford University</i>
<b>Thomas Sleigh</b> Fannie Hurst Poet-in-Residence <i>M.F.A., The Johns Hopkins University</i>	<b>Colin Steel**</b> Professor of Chemistry <i>Ph.D., Edinburgh University</i>	<b>Mary E. Sullivan</b> Lecturer in Physical Education <i>B.S., Boston State College</i>	<b>Saul Touster*</b> Joseph M. Proskauer Professor in Law and Social Welfare and Director, Legal Studies Program <i>J.D., Harvard University</i>	<b>John F. C. Wardle</b> Associate Professor of Astrophysics <i>Ph.D., University of Manchester</i>	<b>Eugene Robert Wiseman, Jr.</b> Lecturer in Costume Life Drawing <i>B. Arch., Rhode Island School of Design</i>
<b>John H. Smith</b> Professor of English <i>Ph.D., University of Illinois</i>	<b>Maurice R. Stein**</b> Jacob S. Potofsky Professor of Sociology <i>Ph.D., Columbia University</i>	<b>Lois G. Swack</b> Lecturer with rank of Assistant Professor in the Hornstein Program <i>Ph.D., Union Graduate School</i>	<b>Judith Ebel Tsipis</b> Adjunct Assistant Professor of Biology <i>Ph.D., Massachusetts Institute of Technology</i>	<b>Bernard M. Wasserstein***</b> Professor of History <i>D. Phil., Oxford University</i>	<b>Peter D. Witt</b> Lecturer in American Studies and Director, Education Program <i>Ed.D., Harvard University</i>
<b>Peter Smith</b> Jacob Ziskind Visiting Professor of History <i>Ph.D., Columbia University (Massachusetts Institute of Technology)</i>	<b>Lawrence Sternberg</b> Lecturer in the Hornstein Program <i>M.A., Brandeis University</i>	<b>Andrew G. Szent-Györgyi</b> Professor of Biology <i>M.D., University of Budapest</i>	<b>Thomas R. Tuttle Jr.</b> Professor of Chemistry <i>Ph.D., Washington University</i>	<b>Malcolm W. Watson*</b> Associate Professor of Psychology <i>Ph.D., University of Texas</i>	<b>Jerome Wodinsky</b> Associate Professor of Psychology <i>Ph.D., University of Texas</i>
<b>Wilma Smith</b> Artist-in-Residence (Music)	<b>Robert Stevenson</b> Professor of Chemistry <i>D.Sc., Glasgow University</i>	<b>Robert Szulkin</b> Associate Professor of Russian <i>Ph.D., Harvard University</i>	<b>Pierre Van Moerbeke*</b> Visiting Professor of Mathematics <i>Ph.D., Rockefeller University (University of Lieges)</i>	<b>Geoffrey Wolff</b> Writer-in-Residence <i>B.A., Princeton University</i>	
<b>Leigh Sneddon</b> Assistant Professor of Physics <i>D. Phil., University of Oxford</i>	<b>Douglas J. Stewart</b> Professor of Classical and Oriental Studies <i>Ph.D., Cornell University</i>	<b>Andreas Teuber</b> Visiting Assistant Professor of Philosophy and History of Ideas <i>Ph.D., Harvard University (University of Washington)</i>	<b>Helen Van Vunakis</b> Professor of Biochemistry <i>Ph.D., Columbia University</i>	<b>Richard S. Weckstein</b> Carl Marks Professor of International Trade and Finance <i>Ph.D., Yale University</i>	
<b>Barry B. Snider</b> Associate Professor of Chemistry <i>Ph.D., Harvard University</i>	<b>Alan Stolzenberg</b> Assistant Professor of Chemistry <i>Ph.D., Stanford University</i>	<b>Ralph Thaxton Jr.</b> Associate Professor of Politics <i>Ph.D., University of Wisconsin</i>	<b>Pieter C. Wensink</b> Associate Professor of Biochemistry and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., The Johns Hopkins University</i>	<b>Lawrence Wolff</b> Lecturer in University Studies <i>M.A., Stanford University</i>	
<b>Esto Sofman</b> Lecturer in English and American Literature <i>M.A., Fairleigh Dickinson University</i>	<b>Lyman Stookey</b> Adjunct Associate Professor of Legal Studies <i>L.L.M., Boston University</i>	<b>James A. Storer</b> Assistant Professor of Computer Science <i>Ph.D., Princeton University</i>	<b>Richard Varney Jr.</b> Lecturer in Physical Education <i>B.A., Harvard University</i>	<b>Peter Woll</b> Professor of Politics <i>Ph.D., Cornell University</i>	
<b>Bennett Solomon</b> Lecturer in Jewish Education <i>Ed.D., Harvard University</i>	<b>Serg N. Timashoff</b> Professor of Biochemistry <i>Ph.D., Fordham University</i>	<b>Caldwell Titcomb***</b> Professor of Music <i>Ph.D., Harvard University</i>	<b>Gloria Waite</b> Assistant Professor of African and Afro-American Studies <i>Ph.D., University of California, Los Angeles</i>	<b>David Wong</b> Associate Professor of Philosophy <i>Ph.D., Princeton University</i>	
			<b>Cheryl L. Walker</b> Assistant Professor of Classical and Oriental Studies and Manheimer Term Assistant Professor of University Studies <i>Ph.D., University of North Carolina</i>	<b>Jonathan S. Woocher</b> Assistant Professor of Jewish Communal Service (Low School) <i>Ph.D., Temple University</i>	
				<b>William Michael Wormington</b> Assistant Professor of Biochemistry and Rosenstiel Basic Medical Sciences Research Center <i>Ph.D., University of Kansas</i>	
				<b>Donald E. Worster</b> Professor of American Studies <i>Ph.D., Yale University</i>	
				On leave Fall Term 1984-85*	
				On leave Spring Term 1984-85**	
				On leave 1984-85***	

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